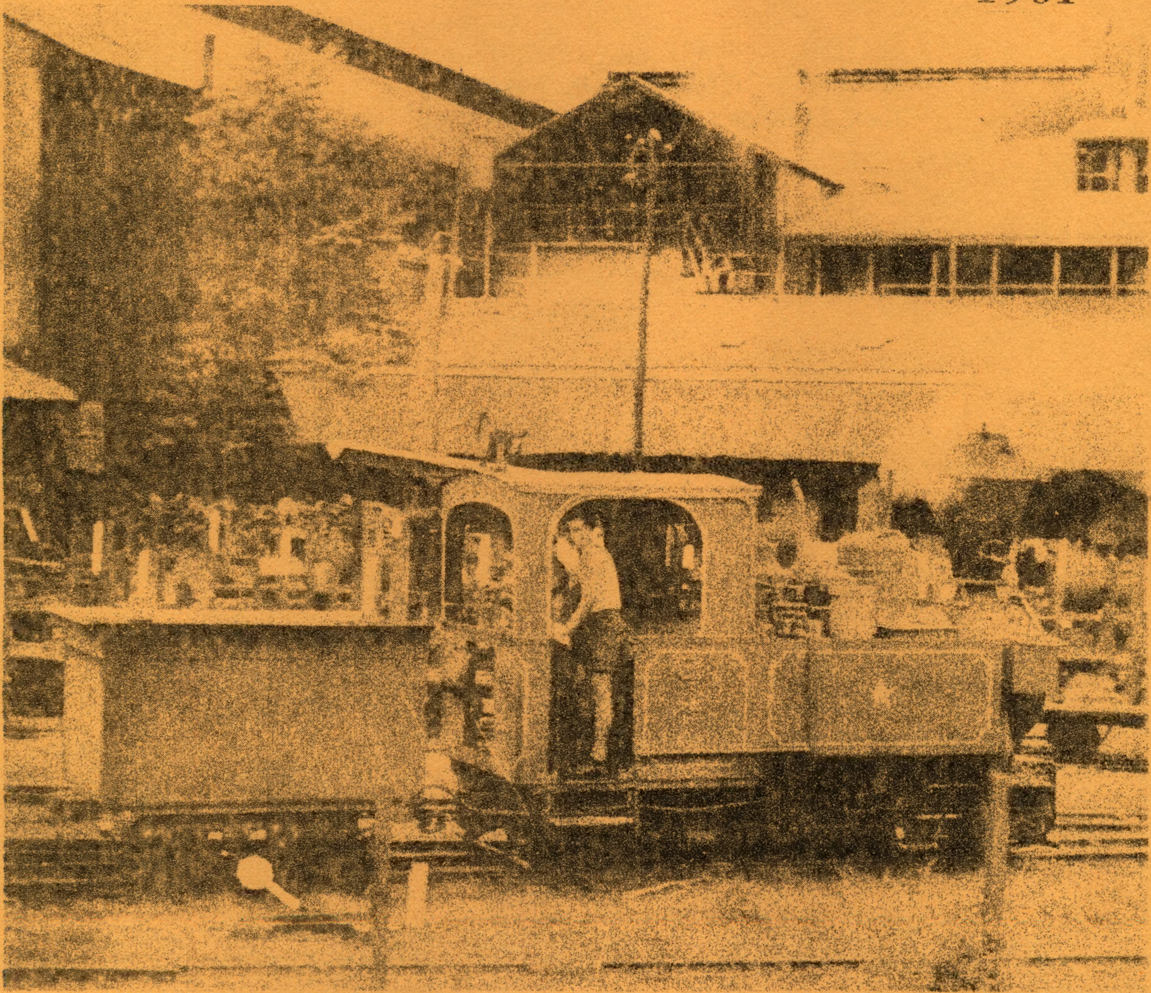
AMRA
JOURNAL

ISSUE FOR
AUGUST
1961



NUMBER
41

JOURNAL
of
The Australian Model Railway Association

Page 2.
Aug., 1961

Volume II No. 3.
Consecutive Issue No. 41.

MANAGING EDITOR.
Arthur Harrold, Gympie Terrace,
Noosaville, Queensland.

CO-ORDINATING EDITOR.
Maurie McKinnon, 6 Caleb St.,
Bentleigh East, SE15, Vic.

ART DEPARTMENT.
CONTRIBUTING ARTISTS
Jack Treseder, Frank Puls, Arthur Harrold.

HEADINGS.

Tim Dunlop

TYPING

Mrs. Rees Jones.

STENCIL CUTTING.

Mrs. J. Hobbs

PRINTING

Tim Dunlop

COLLATION

Jack Treseder

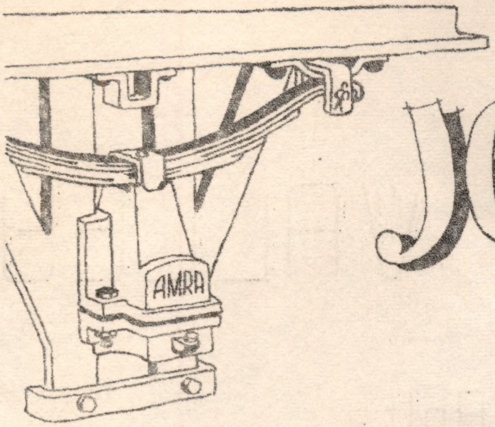
ENVELOPE ADDRESSING

Jack May

Address all A.M.R.A. correspondence, (other than "Journal" material) to the Federal Secretary, Mike Saunders, 6 Ash Grove, East Malvern, Victoria.

ON THE COVER

An 0-6-0, 2'6" gauge loco working in the yards of the sugar mill at Gordon Vale, Queensland.



Editorial . . . JOURNAL BOX . . .

THE VICIOUS CIRCLE.

For every letter to the editor which sees print in "Pop Valve" there is another which doesn't. This does not mean that if you sit down and write one of those letters the editor is always asking for there is a fifty-fifty chance that it won't be published; actually all the letters written and intended for "Pop Valve" find their way there. But there are other correspondents who write to the editor on a more personal level, whose letters,being more confidential, often contain remarks not strictly for publication.

One theme which has cropped up twice lately is the vicious circle, the peculiar thing about which is that it seems to affect the respectable married members of our hobby, the ones with family responsibilities. As one writer says: "I work to earn money to feed, clothe and house myself and my family and if there is any money left over I can spend it on my model railway. If I like to work overtime I can earn more money but I have less time for my railway." Then another says: "I am convinced that our hobby is for the young unmarried male or the retired soul. The married ones are so busy making a living and generally being suburban householders that there is precious little time left for building and running a railway."

Now if this is true and so much despondency and frustration affects all our senior members it is high time something was done about it;it is true that lack of money and lack of time can limit one's resources, but there is no need for them to bring everything to a standstill. You don't have to have a model railway of your own to take part in and enjoy the hobby, because there is always the State Branch layout for you to use, and if there isn't one, it's time you and a few others set about building it, and by pooling your resources it can all be done much more cheaply in cash and at a cost of not more than one night a week in time. It's terribly easy to get into the worst vicious circle of all, where nobody does anything because they are all waiting for somebody else to begin.

CORRECTIONS DEPARTMENT.

Did you have any difficulty with the pictures and text in Tim Dunlop's article on the Happy Valley Railway in the last issue? The diagrams were all there, but the numbering was wrong. If you read it again you will find it sorts itself out all right provided you pay no attention to the diagram numbers.

THE

"CANDEMAH VALLEY"

by Cedric Rolfe.

The layout plan shown with this article is not to scale, but it is near enough to give you an idea of the extent of my layout. Actually it is extremely difficult to draw a plan of it as it is on four different levels, the highest being at eye level and the lowest at table height. The top reverse loop is a storage area for two trains up to four feet in length, and it is left to the imagination of the viewer that those trains have departed for the junction at some point on the Government Railway. Part I of the story of Candemah Valley actually begins at this point. Part II deals with a trip to Namoi and beyond, and refers to the goods side of the layout, and a visit to the docks and the homeward journey.

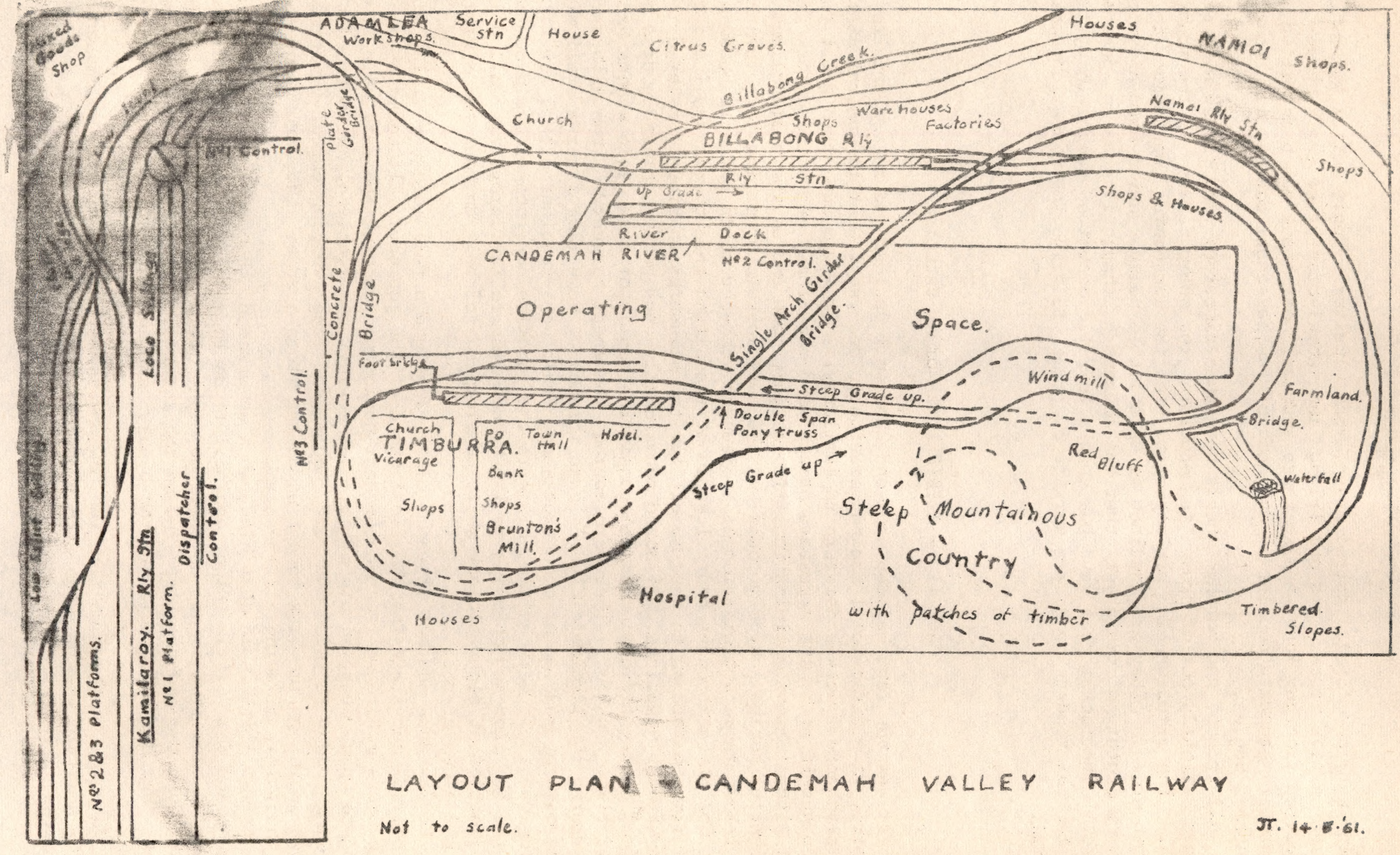
The layout is nowhere complete yet but it is well on its way. Most of the track and all of the points are hand made, including a double slip, three diamond crossings, and two crossovers. There is a total of thirty-one points in all. The main layout is twenty-seven feet by twelve feet, with the end section extending a further four feet in width. All bridges are home made, as are most of the buildings. There are a few modified "Airfix" houses and a few "Bilteezi" models altered to fit my needs.

Scenery is all natural herbage; the hill sides are made from plaster of Paris mixed with sawdust and painted. A backdrop around the complete layout has nearly been completed and depicts the countryside appropriate to the area. It is all hand painted. Lighting is arranged to give both day and night effects.

The locomotive stock consists of nine active locos, which are listed below: Two Hornby "Duchess of Atholl" (two-railed), one Triang 0-6-0 shunter (modified), one Triang 0-6-0 goods (modified), one Hornby 8F goods loco (two-railed), one Hornby 0-6-2 (two-railed), one Triang dock shunter, one Fleischmann Alco diesel switcher, and one Triang R57 diesel (modified). Also, but out of commission there is one Triang 'Prairie' tank.

Passenger stock consists of six BR Triang main line coaches, one restaurant car, three Triang T.C. passenger coaches, one Triang observation coach, one Triang T.C. mail express coach. Yet to be made, when opportunity permits and when the plans arrive, are three NSWGR passenger guard's vans.

Goods stock includes one NSWGR 'HG' class van, one NSWGR 'HG' class van nearly complete, six Triang open goods wagons, two Triang closed goods vans, five Triang bulk grain wagons, four Hornby mineral wagons, one Hornby refrig-



LAYOUT PLAN - CANDEMAH VALLEY RAILWAY

Not to scale.

JT. 14·8·61.

erator van, one 'Shell' petrol wagon, one 'Caltex' bogie petrol wagon, two Triang cattle trucks and one Triang long wheel-base brake van. Under construction are four four-wheeled sheep trucks. Most stock has been fitted with Rivarossi standard couplers, and some of the passenger coaches have complete Rivarossi bogies.

All Triang and Hornby wheels have been discarded and fitted with metal wheels slightly out of scale to negotiate the sharp curves in the mountain area. The metal wheels are essential for the successful operation in the hidden areas. They are inclined to be a little noisy, but I have never been near a prototype train yet that has sounded as though it were on pneumatic tyres. The recent heat wave has done a terrific amount of damage to my track and the maintenance gangs are working overtime to bring the operation back to normal.

PART II - A TRIP TO CANDEMAH VALLEY

It was the long holiday week-end and so I decided to take a trip to the country, in a direction I had not previously been,so I went to Central Station and purchased a week-end return to Kamilaroy. It was a long trip and I furnished myself with the necessary papers and magazines and settled back in my seat with pleasant anticipation. It was just noon and as the train glided out of Central behind a C.38 I could see the busy workers preparing to return home but I knew their anticipation of a pleasant week-end could not overshadow mine.

For the next eight hours I would be travelling through country I had seen many times before so to save myself for the pleasures in store I relaxed in my seat with my magazines. I dozed occasionally and as the afternoon drew on I noticed heavy freights passing consisting mostly of bulk grain wagons hauled by 42 class diesels. They were moving the wheat harvest. Then with a rush and flurry the 'Armidale Flyer' came through. Some time later a small mixed goods came by made up of open trucks and fruit vans together with a few refrigerator vans. We were getting close to the junction now; soon I would be leaving the NSW line and changing to the branch line to Kamilaroy. We pulled into the junction at eight o'clock where we stopped for half an hour for a bite to eat and a cup of tea.

It was dark now but it was a clear night and a full moon was rising as we re-entered our train for the final stage of the journey. It would be nearly three hours before we reached our destination and despite the late hour I was going to enjoy every minute of it. As we left the junction, we noticed that the line began to twist and turn and on one long sweeping curve, I noticed a helper engine on the back to get us up the steep grades. We were right among the mountains, climbing all the time.

It was nearly half past nine when we reached the crest of the Timburra ranges and the little helper engine left us to return light to the junction. It was a beautiful scene up there at night with the moon shedding its soft light over the countryside, and on the return journey I would see it by daylight; but nothing could dim the beauty and enchantment of that moonlight scene.

We were on the downhill run now and as we rounded a curve we passed Red Bluff, a little wayside stop with a general store,a combined butcher and baker and a few cottages all in darkness; a soft wind was blowing and the windmill was pumping water into the tank for the village water supply. At Red Bluff, high in the mountains, we could look down on the twinkling lights of Timburra, a busy thriving town in the wheat belt.

As we sped on through the night, we were soon entering the outskirts of the town and the telegraph poles were flashing by. We were slowing then as the distant signal was showing amber. On our right Brunton's Flour Mill was working a late shift and a team of men were loading flour into a covered van and wheat was being discharged from motor trucks into the six enormous silos beside the mill. The signal changed to clear and we were moving on with the home signal showing green and Timburra station came in sight.

The train came to a halt at the station and we got a glimpse of the life of the town. It was showing 9.50 by the Town Hall clock and at the Royal Hotel across the road the men folk were making the most of the ten remaining minutes before closing time. With siren screaming an ambulance came round the corner heading for the mill. It seemed as though there had been an accident of some kind. Let's hope it was not too serious.

The guard blew his whistle and we were on our way again across a double span pony truss bridge and I noticed a double track here. On we went through a cutting into a tunnel and out again over a single span Pratt truss bridge across a river gleaming in the moonlight and in the distance somewhere the roar and thunder of the waterfall. On through farm land and then round a curve and we approached the thriving town of Billabong with its many industries, and its river dock. There was no shipping in the dock at this time as the fishing fleet was out. All was quiet at this time of night and we passed through without stopping. Just past Billabong we came to a double junction where another busy line went on to Namoi and places beyond and my mind filled with the possibility of visiting some of those places on the morrow.

We passed the junction and were then on the last short link of our journey. We rounded a sweeping curve and on our right the moonlight glinted on the water of the bay. We were then on the viaduct approaching the high level passenger station of Kamilaroy. Below on the right were the busy goods yards with a freight ready to pull out on the long trip to Sydney; another, not long arrived, was waiting for the signal to come in with a consist from the branch line. To the left was the loco depot and turntable with a little shunter steaming and puffing waiting to do its chores as soon as the incoming passenger train had discharged its human cargo.

We entered No.1 platform ablaze with lights and when the train stopped I gathered my few possessions and stepped from the carriage, tired but filled with the beauty of the scenery through which I had passed. I walked down the stairway and into the large foyer of the terminal and seeing that the R.R.R. was still open, I decided on a quick cuppa and then went outside to the taxi rank. A short drive to the Fleece Hotel where I had booked a room and my eventful day had ended.

I awoke early the next morning with the sun streaming through my window. It was too good a morning to be lying in bed, so I rose quickly, went to the window and looked out. My room overlooked the Kamilaroy Goods yard and despite the early hour and the fact that it was Sunday, there was intense activity. An 0-6-0 Shunter was busy moving trucks and a 2-8-0 was just backing up to a string of laden vehicles in preparation for its journey. I dressed quickly, went downstairs and out to the Cyclone fence surrounding the yard. Soon the signal was given and the 2-8-0 with its heavy load slowly drew out. I watched until it passed under the plate girder bridge advertising Arnott's famous biscuits and into the cutting. I was able to catch a glimpse of it as it came out of the cutting round the bend on its way to Billabong Jetty. The last I saw of it was when it passed under another plate girder bridge advertising Glossmaster paint.

I watched the shunter at work for a while and then returned to the Fleece for a quick breakfast. There I heard that a train left for Namoi and beyond at 10.0 a.m., returning late in the afternoon, so I went up to Kamilaroy and purchased my ticket. I discovered that it was a mixed train with one coach only. This suited me well as I would have more time to study the countryside. The coach was in No.2 platform when I arrived and there was still half an hour to go. An 0-6-2 shunter brought up a string of empty trucks and pushed them into No.1 platform where an 'HG' van was already waiting. Leaving the trucks there the shunter then picked up the coach from No.2 and shunted it on to the fore end of the train. Its job done, the shunter then took off for the yards and a few minutes later an 0-6-0 loco with tender backed up and hooked on. A short delay and then we were away.

As we moved out I saw more clearly by daylight the approaches to the terminus which I had seen by moonlight the night before. It was not long before we were at the double junction and swinging around to the right we passed across a reinforced concrete arch bridge and into a long tunnel. I closed the window to shut out the smoke and it seemed a long time before we at last shot out of the tunnel into a cutting and across a single span arch girder bridge over a wide river, on to a viaduct and slowed down to enter Namoi station.

Namoi railway station is an island platform and passengers arrive or depart by way of a footbridge at the top of which are the booking offices. Below this is a kiosk acting as a foundation for the offices. The heavy traffic on this branch line brought about duplication of the track in this section. There are no goods facilities at Namoi as all goods are brought there by road from Billabong. I decided to leave the train at Namoi and took the service car out to the Reservoir where I got some goods shots with my camera. On the return of the service car I decided not to wait for the return train but to catch the bus to Billabong jetty.

As I travelled along the road to Billabong I noticed on the right a winding creek and a party of young people fishing from an outboard motor boat. On the far side of the creek were acres and acres of orange trees and it made my mouth water just to look at them. Between the road and the creek were some factories and one particularly took my notice - the Galah Marmalade and Fruit Juice Company. There were other factories on my left, the Button and Buckle Factory and the Billabong Wire works. Just past these was the Bank and a row of shops leading down to Billabong Railway Station. Past this was the road leading to the docks and on the corner was a big stone building with a sign on the roof - "Billabong Cafe".

On the right was the Billabong Citrus Packing Company; here I alighted from the bus which continued on across a wooden bridge to pick up the worshippers at the old Norman style church with its graveyard beside it. I walked down the road towards the dock under the railway bridge and on my right was the office of the Dock Authority. I crossed the railway tracks to the dock and noticed two refrigerated motor trucks backed into the doorway of a stone building. On closer investigation I found it to be Stahl and Smellies' Fish Warehouse. Resting at the side of the warehouse was a refrigerator van being loaded with the morning's catch. The fishing fleet must have brought in their cargoes and gone again, for there was no shipping at the jetty and the operator of the big dock crane had just climbed down and was walking towards me, his job done for the day.

The dock was piled with all types of merchandise, both arrivals and departures. I was feeling tired after my busy morning so I walked back and lunched at the Billabong Cafe. Satisfied with what I had seen I decided to return by road to Kamilaroy and rest for the remainder of the day. When I awoke the next morning and had breakfast I had but an hour to spare, before my train left for the junction.

When I arrived at the station, there was the company's latest addition, a four-coach train comprising three corridor coaches and an observation car, all in stainless steel with corrugated sides and hauled by a 42 class diesel in cherry and silver livery. It was a beautiful looking train and I was fortunate to be travelling on it. I quickly obtained a seat in the rear end of the observation car and was impatient to be on my way.

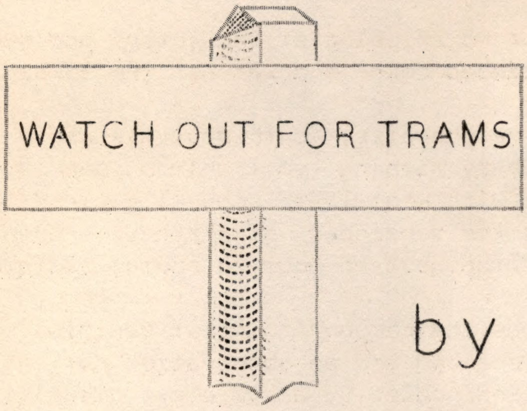
The sun was casting gradually shortening shadows over the countryside as we left and we soon arrived at Billabong. After a short stop the train moved on a short distance from the station and waiting in the siding was an Alco Diesel Switcher which moved up and hooked on the rear of the train to help us up the grade to Red Bluff. No time was wasted and we were on our way once more. Over the bridge by the waterfall, through the tunnel and the deep cutting, over another bridge and into Timburra. As we drew in we noticed a "Pacific" with three coaches waiting on the side track. It would soon pull out heading for Namoi and beyond.

As we left Timburra I noticed a wedding party leaving the big brick Church. It was a public holiday in the city but not up here because I could see the garbage man doing his round. The people of Timburra get the same treatment with their garbage cans as the city dwellers;some cans were on their sides and lids were lying in the gutter. A couple of women were gossiping over the front fence and children playing on the road. The flour mill was still busy as we made the run along the flat gaining speed for the steep grade ahead, leaving Timburra behind. The steepness of the grade was telling and the need for the helper was shown. We were gaining altitude rapidly as we climbed along the side of the steep mountain, till at last we reached the summit at Red Bluff. The helper slipped its coupling and as we continued on, it backed down towards Timburra. As we turned round Red Bluff I looked back for a last glimpse of Candemah Valley before the mountains shut it from view.

AUTOMATION

The Hamburger Hochbahn, Hamburg's city railway system,which operates both elevated and underground lines, is to be automated. By the end of 1962 the trains are to be controlled by an electronic brain which will be responsible for starting and stopping trains and routeing them correctly. It is claimed it will be the first completely automated passenger carrying system in the world.

Ern Raddatz.



WATCH OUT FOR TRAMS

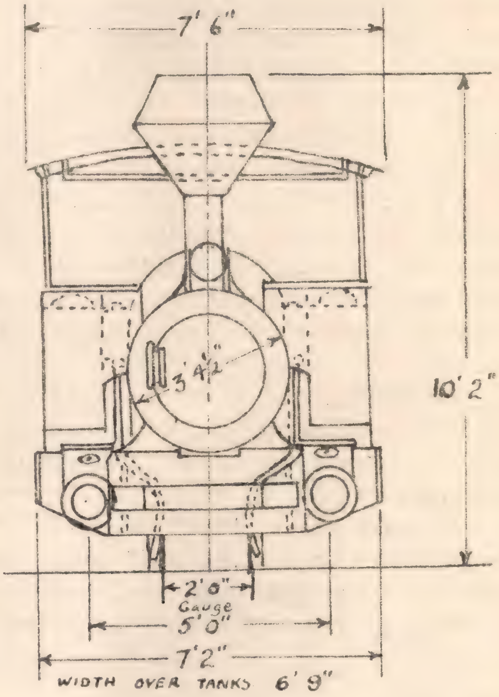
by Arthur Harrold

The sugar tramways of Queensland form a fascinating subject all of their own, especially those which operate to the customary 2'0" gauge. Like some other types of railway, such as the industrial line and the short line, they are self-contained and provide the modeller with an opportunity to build a layout which is an end in itself, having no connection with any other line except at the main rail head, which can in any case be disregarded by the modeller. Furthermore, because the prototype is narrow gauge, so is the model, and so the modeller is presented with a golden opportunity of building a layout which can be comprehensive and yet portable.

The focal point of the railway is of course the mill, where the sugar is processed. The mill also provides shed facilities for coaling, watering and repairs to the locomotives, and in the yards there are diverging tracks to allow loaded wagons to be taken inside and unloaded and on which rakes of empty wagons can be stored awaiting their turn for distribution outside. Occasionally the tracks radiate from the mill to the surrounding canefields, but more often a single line leaves the mill, with turn-outs at intervals, until the extremities of the cane producing areas are reached. The main line, on which the locomotives work, consists of well laid permanent track, but further from the centre, the track becomes rougher, being often moved from one place to another as the occasion demands. In these places the trucks are usually manhandled or small rakes of them may be pulled by horses or tractors.

The number of locomotives in service at any particular mill varies with the size of the area under cultivation; at the Moreton Central Mill at Nambour about seventy miles north of Brisbane, there are six. These are of various types (0-6-0, 0-4-2, and 0-4-0) and until recently included "Shay", the last geared locomotive of its type in Australia. However, this engine has been retired from service and now sits at rest on a grassy bank in the mill yard with a short length of track supporting each bogie. In North Queensland, the little steam locomotives, so characteristic of the sugar industry, have been largely replaced by chunky little diesels, but at Nambour steam still holds sway.

As on all tramways, signalling does not exist, and the methods used for six or more locomotives to work on single line track and avoid collision vary from one canefield to another. In some, two-way radios link each locomotive with the control centre at the mill, while other systems rely entirely on the time-table to regulate the work of trains. Nambour relies on the latter method, the day's programme being somewhat as follows: At 6.0 a.m. on Monday morning all locos leave the mill and are allocated a branch for working where they marshal loaded wagons into trains and get ready to return. At eight o'clock the first engine, presumably that working on the nearest branch, steams back to the mill with its train; the engine uncouples, moves round to the rear of the train and pushes the loaded wagons one by one over the weighbridge.

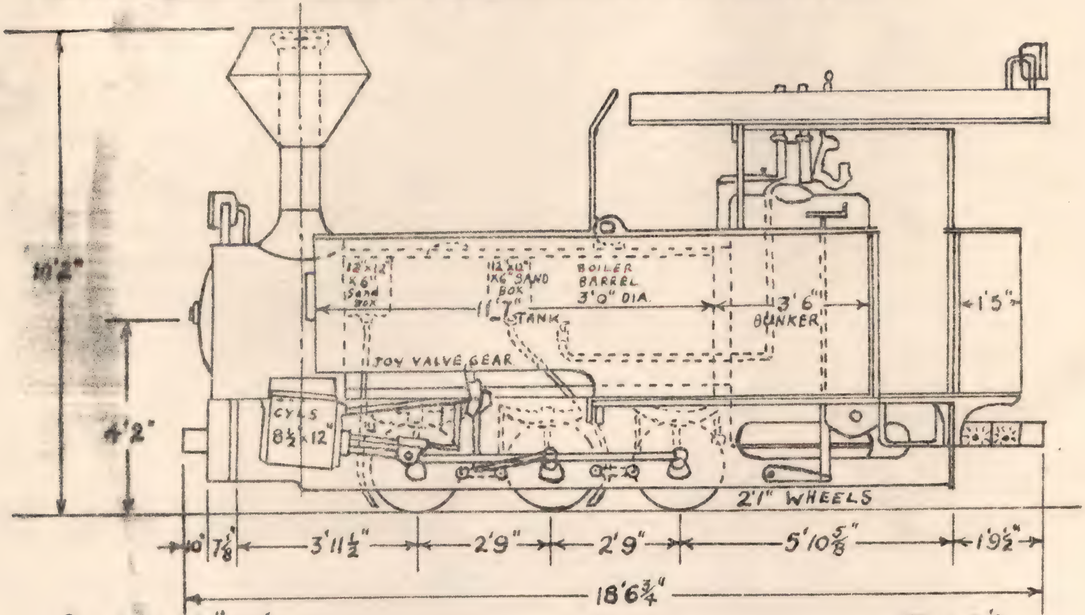


Scale :- ¼" = 1'   JT 13·6·61

The engine then remains at the mill doing any shunting work that is required until nine o'clock when it departs with a train of empties, leaving the way clear for the next train which is due to arrive at 10.0. The engine of this train goes through the same routine until its turn to leave comes at 11.0. This goes on right through the day and night till the last train arrives at 8.0a.m. on Saturday morning. The tracks are so arranged that they encircle the mill, allowing the trucks to pass over a conveyor belt on to which the cane is tipped; the empty trucks then form up on the other side of the yard ready to be taken back to the canefields in the next available train.

Apart from the cane wagons, which are little four-wheelers with a post, or stanchion, at each corner to keep the cane aboard, and the locomotives which are of course the main attraction of such a railway, there is not much rolling stock. A rake of small

2' 0" Gauge Locomotive Built By John Fowler & Coy., Leeds, England.

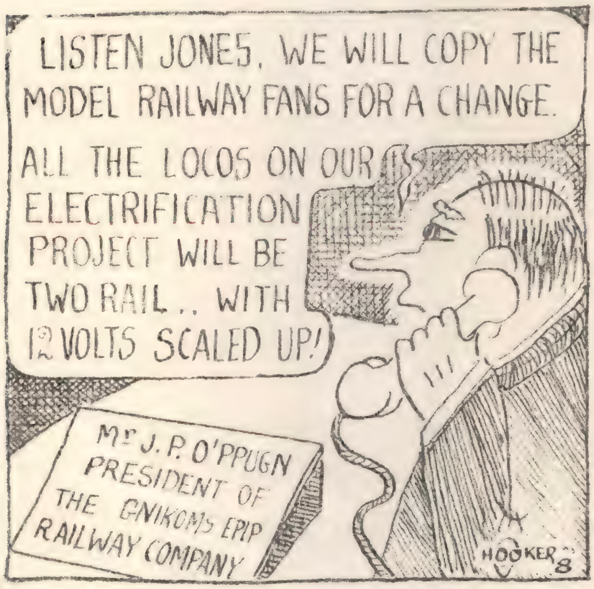


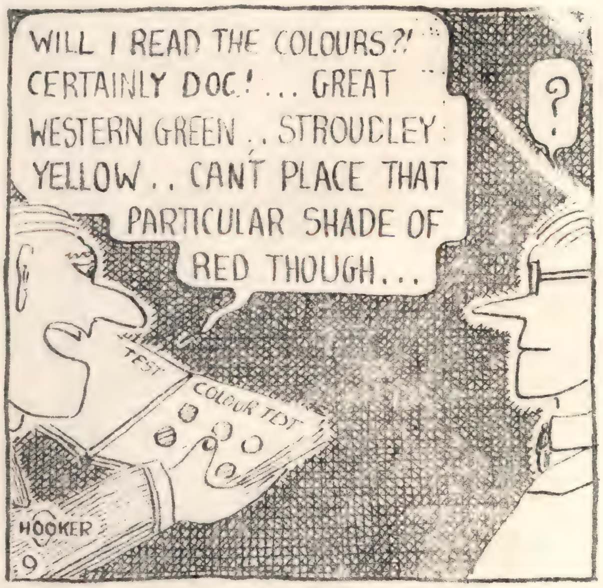
Scale :- ¼" = 1'   JT 11·6·61

four-wheeled hoppers supplies coal to the engines; a bogie flat car carries rail and sleepers for track maintenance, and an open-sided bogie 'van' carries the workmen. There are also two small petrol driven engines which haul the work train and assist with the marshalling of the wagons in the fields.

Reducing such a railway to model form involves the choice of a suitable modelling scale to permit the maximum use of existing track components and running gear. In this connection 'TT' comes at once to mind with its 12 mm track gauge. If this is made to represent a prototype gauge of 2'0" the scale immediately becomes 6 mm to the foot, which is not far short of $\frac{1}{4}$" (6.35 mm), making 'On2' the scale of choice. Claude Henderson's "North Arm Tramway" is a mining line built to this scale. He uses 'TT' track and Rokal underframes for the carriages and wagons but builds his own locomotives; but conditions being what they are in this country, it will be many years before an 'On2' tramway locomotive appears on the market, so the narrow gauge enthusiast must always be prepared to build much of his own rolling stock. The diagram which accompanies this article illustrates one of the 0-6-0 locomotives used on the Innisfail Railway of the Q.G.R., but is similar to many seen on the sugar lines.

In conclusion, it is worth while giving a thought to '000' track as a possible medium for a 2'0" gauge tramway. This track has a gauge of 9 mm, so if 9 mm represents 2'0" the resultant scale is 4.5 mm to the foot, which is reasonably close to 3/16" (4.75 mm) and so could, theoretically at any rate, be the basis of a 'Sn2' layout. 'Sn3$\frac{1}{2}$' is the scale most commonly favoured by modellers of Q.G.R. 3'6" gauge stock and would therefore most likely be the scale used for the main rail head. For the portable layout the use of 3/16" scale would also mean that a bit more could be squeezed on to the board. But there are limits to what ten thumbs can manage, so perhaps it is better to stop there!


LISTEN JONES, WE WILL COPY THE MODEL RAILWAY FANS FOR A CHANGE.
ALL THE LOCOS ON OUR ELECTRIFICATION PROJECT WILL BE TWO RAIL .. WITH 12 VOLTS SCALED UP!
Mr J. P. O'PPUGN PRESIDENT OF THE GNIKOMS EPIP RAILWAY COMPANY
HOOKER
8


WILL I READ THE COLOURS?! CERTAINLY DOC! ... GREAT WESTERN GREEN .. STROUDLEY YELLOW .. CAN'T PLACE THAT PARTICULAR SHADE OF RED THOUGH...
?
TEST
COLOUR TEST
HOOKER
9

NOTES ON PLASTICS

by Ivan Loszlo

In this often frustrating hobby of ours it is a help to know something about the materials one uses. Normally, with metal or wood, one has a fairly good idea of the properties and capabilities of these materials, but plastics are very numerous and very different, and the average person usually stands undecided before using one or other of the plastic substances now available.

In our hobby probably the most commonly used plastics are polystyrene, nylon, PVA, PVC, the epoxies and polyethylene (polythene). A short note on each of these, with notes on the solvents or glues best used, now follows.

Polystyrene is a flexible although essentially rigid material,which melts easily at relatively low temperatures. It can only be moulded at home into new shapes with great difficulty, using a similar process as that used to bend aircraft ply, and then often with only uncertain success. One can make an excellent polystyrene glue the following way: Take a small screw top bottle and insert an eye dropper permanently into it to act as an applicator. Put waste bits and pieces of polystyrene, such as the waste laddering material on to which kits are often attached, into the bottle till it is about a quarter full and then top it off with trichlorethylene (the "Trilene" of medicine). It is a mild anaesthetic and has some poisonous properties and so must be used with care. Trilene itself is an excellent polystyrene glue, but if you break it down with plastic it is better.

Nylon cannot be glued easily except by epoxies ('Araldite' and the like). Nylon is spongy and has a greasy feeling, but on the whole it is a useful material. It has excellent anti-abrasive qualities, hence its use in bearings.

PVA is Poly Vinyl Acetate. When it is used on wood, it is an excellent glue ('Fixol','Aquadhere', etc.) but it has little tensile strength by itself. Polystyrene glues fasten it to polystyrene and if you have trouble sticking polystyrene to metal or wood (you should have no difficulty with wood) stick a piece of PVA to polystyrene, and then you can join them easier. PVA paint is a good model railway paint; it is extremely easy to apply, it is quick drying, and does not chip; it does not show brush marks, and the "thinner" is water.

PVC, which is Poly Vinyl Chloride, is available in a rigid or a non-rigid form. The rigid form is harder than brass. It requires a special glue because it is a polymerised compound; that is, it has qualities which make it difficult to glue it to other plastics without another polymer. Now, there is a glue available for this, namely PVC in pre-polymerised form. If you spread the glue on to it, and another layer to a metal or wood surface, the two can be joined to give a very strong and permanent bond. PVC can be best distinguished from PVA by the latter's flexibility. PVC is rigid even at a thickness of 1/16".

Epoxies are readily available as plastics;they are practically indestructible and are very hard. Epoxies are a wonder material and I would not be surprised if some epoxies may one day be used as structural materials in prototype railways as well as in building construction. Their tensile strength is far superior to the best tool steel, and their characteristics regarding abrasiveness and acid resistance border on the miraculous. They can be turned and milled with ease.

Polyethylene is the thin plastic from which plastic bags are made and a glue can be obtained for that too. The material is best used in places where flexibility is needed with hard wear, such as corridor connections. It is an extremely difficult material to shape, but shaping can be done with a lukewarm iron.

* * * * *

MARKLIN REMARKS

BY FRANK PULS

The firm of 'Marklin' does things on a big scale in more ways than one and has standards of its own. If, for example, one were to take a 'Marklin' locomotive from stock and modify it to run on semi-scale two-rail 'Hornby' or 'Rivarossi' track and to 12/14 volts DC supply, this is what would be necessary: First you would have to insulate the wheels, valve gear etc. on one side of the engine and tender; secondly, while the wheels were off it would be necessary to turn down all the flanges and adjust the back to back dimensions; thirdly,if remote control reversing is desired the loco must be converted from AC to DC with the aid of a special coil. Ordinarily, directional control is effected with the aid of a switch on the engine, but although an AC 'Marklin' will run on DC supply remote control reversing is impossible without the addition of the special coil. Fourthly, you must attach your favourite couplings.

Now what have we done? We have converted a 'Marklin' loco from three-rail to two-rail, and from AC to DC. We have standardised the wheel back to backs, and the flanges, and the couplings have been changed. What a lot of time and expense! How much simpler would it be if these fine engines were supplied from the makers with insulated wheels and with smaller wheel flanges, all of which would still allow them to run on three-rail, stud contact,or two-rail systems merely by altering the pick-ups and changing a wire or two around. This firm can supply beautifully realistic and inexpensive locos which are well engineered too - until you want to convert them to run on world standard track! The stud contact system could be retained, but could not the printed tin plate "ballast" be replaced by plastic in relief into which the studs could be inserted easily, costing little more, if anything, to the manufacturer?

AUTOMATION ON YOUR RAILWAY

BY ALLAN DOWEL

Can you tell me of any feature on a model railway which is more attractive than train operated automatic signalling? Few have attempted it, and I feel that anybody with a reasonable stretch of "one way" track should do so. That is not to say that it could not be applied to two way traffic, but let's keep down to earth. I hope that after reading this anyone with enough electrical know-how to wire a normal layout will feel capable of attempting an "auto" job. I will deal with the subject in five parts, namely: general; relays; three-rail with no insulated wheels; three-rail with insulated wheels, and two-rail.

GENERAL:

(a) Divide your "stretch" into sections. To be effective, you should have at least four sections in a "point to point" stretch and at least six in a "circle". The sections must be at least as long as your longest train.

(b) For each section you will require a two-aspect colour light signal, or an electrically operated semaphore signal of the steady current for "proceed" and no current for "stop" type. If the traction voltage is too high for the signals, a radio type resistor is required to drop the voltage down a little. A beautiful Jap two-aspect signal is available at the Model Dockyard, Melbourne, costing 8/9d. ladder and all.

(c) You will also require a relay for each section, the details varying according to your traction system.

RELAYS:

For those who are not too familiar with relays, here is a short burst which should put you wise. A relay comprises an electromagnet coil which, when sufficient voltage is applied, will move an armature. This armature in turn will then move an assembly of contact springs, which comprises a combination of the following:-

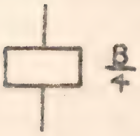
M - Make springs which close a circuit when operated,

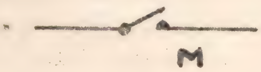
B - Break springs which open a circuit when operated,

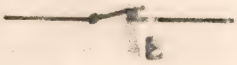
C - Changeover springs which change a circuit from one to another when operated,

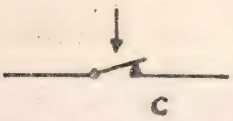
E - Changeover springs which change a circuit from one to another when operated, but close the new circuit before opening the other.

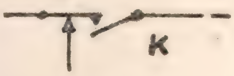
The symbols for a coil winding and the four types of spring-sets, are shown below:-







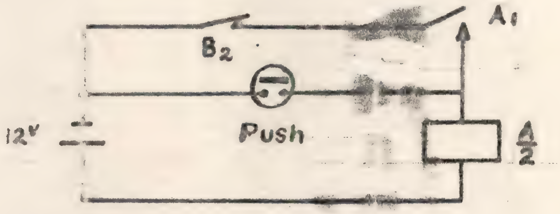




The symbol for a coil widing is an oblong; the letter beside it is the name of the relay, and the number indicates the number of spring-sets that it operates. These spring-sets can then be found "detached" around the circuit marked B1, B2, B3, B4, etc., which makes for a tidy circuit diagram.

LOCKING RELAYS:

A relay can be made to "lock" by means of special connections, and as this feature is used in diagrams 2 and 3, a short explanation may be in order. In the circuit shown below, you will notice that operation of the push button will complete the circuit to energise Coil A. This will in turn operate and close spring-set A.1. When the push button is released, the coil will remain energised and operated via A.1. The only way to release A, will then be to operate B relay, which opens the circuit at B2 to the A coil. Thus, it can be said that A.1 locks A, and B2 unlocks it. Replace the push button with the passing wheels and axles of a train (or just the loco), and you have the idea.

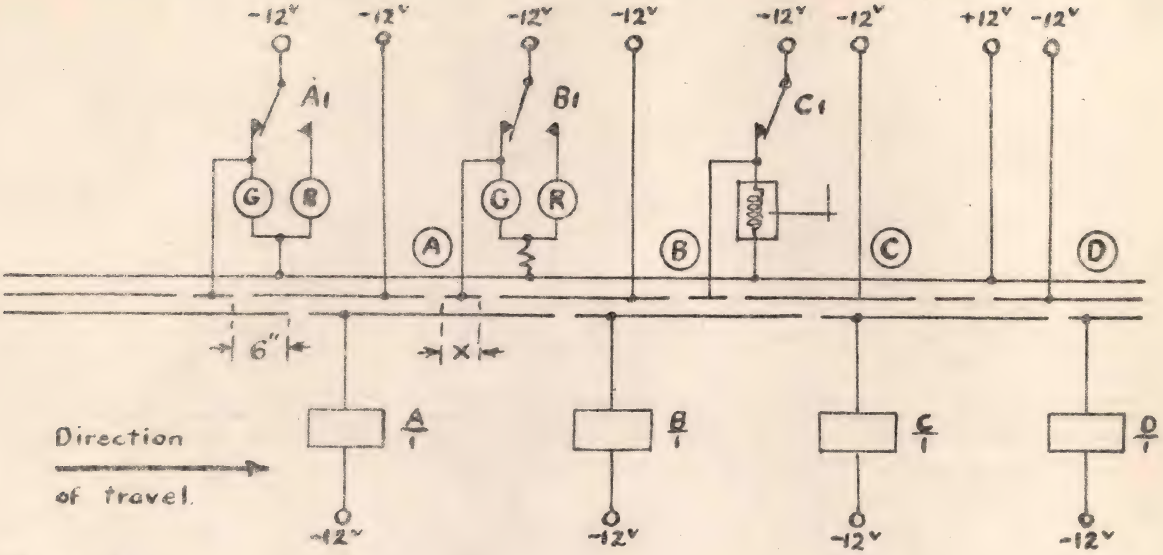


If you are buying relays, particularly secondhand, always go for the C (changeover) spring-sets, as they can be used as B, M, C or even K. Coil values for 12 volts can range from 50 ohms resistance to about 1000 ohms, depending on spring-set "load", but can easily be rewound to suit. 3000 type relays are available in great variety from Waltham Trading Co. in Elizabeth Street, or Carr Camera Co. in Swanston Street, Melbourne, for 10/- to 15/- each, or your own disposal store.

THREE-RAIL WITH NO INSULATED WHEELS:

This is by far the simplest system of the three, but unfortunately to qualify for this part, you must run 3 rail (or its equivalent - studs or overhead), have one running rail insulated from the other, and have all metal non-insulated wheels. This system is basically the same as that used by the railways. The relay required has only one B spring-set for semaphore signals, or one C spring-set for coloured light signalling. I have shown both types in Diagram 1.

A train proceeding from left to right will operate relay A while any wheels are in the A section, via the wheels and axles. A.1 spring-set when operated will change from green to red, and disconnect power from the centre rail, approaching the signal. A following train will thunder to a stop. As the last pair of wheels leaves the section, relay A releases, we get the green and traction power from A1, and away we go. The semaphore takes the place of the green lamp for the C section. The six inches between the end of the power rail section and the start of the running rail section is to ensure that the relay does not switch off the power before the loco gets off the centre rail



Legend:-

○ Lamps. G-green. R-red.

-ʌʌʌ- Radio resistor.

X The distance required to stop your fastest train.

—— —— Break in rail.

Diagram 1

Three-rail with no insulated wheels.

JT 10·6·64.

section itself. The signal should be mounted adjacent to the gap in the running rail. Return traction current is via one running rail only, but this is more than adequate.

THREE-RAIL WITH INSULATED WHEELS:

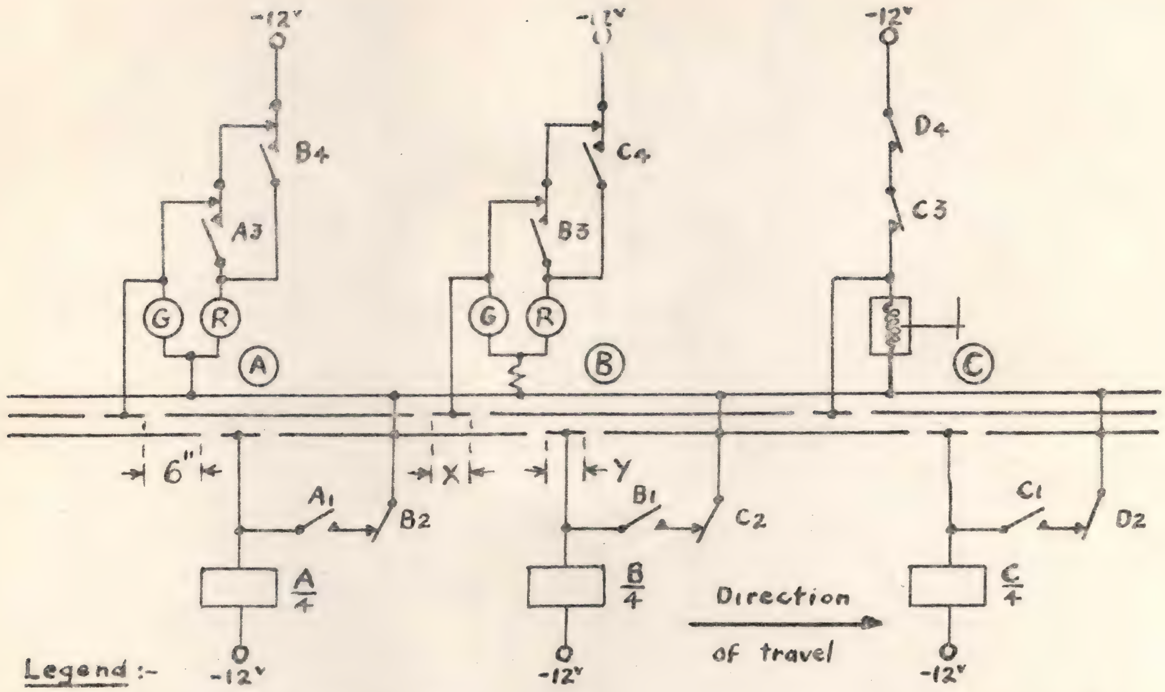
This system is very similar to that used in Diagram 3, as both can rely on only the loco having metal wheels, and therefore both employ the locking system. This system requires each relay to have four spring-sets:-

For semaphore signals - M, B, B, B.
For colour light signals - M, B, K, K.

Semaphore signals are well worth considering as they keep the wiring simple, and look very effective. I have shown three signals in the circuits, 12-volt lamps, lamps less than 12 volts with resistor, and semaphore signals. Enough centre rail (X) must be insulated prior to each signal to stop the fastest train. A piece of one running rail from 3" to 3' must be insulated and connected to the relay coil. Not all relay springs and coils are shown, because some are in the section ahead or behind the circuit as drawn. (See Diagram 2).

When a train passes point A, the A relay is energised via the wheels and axles of the loco. A relay operates and locks via its own contact A1 and the normally making contact B2. A3 changes the A signal to red, and removes power from the A centre rail section. A2 and A4 are in the previous section for a "circle" system, and are not required for a straight "stretch".

When the train passes point B, the B relay operates similarly. B relay locks via its own contact B1, and the normally making contact C2. B3 changes the B signal to red, and removes the power from the B centre rail section. B4 keeps signal A on red, and power off the A centre rail section, because the tail end of our train is still between A and B. B2 unlocks relay A, which releases, but has no effect.



Legend :-

○ Lamps. G - green. R - red.

Radio resistor

X The distance required to stop your fastest train.

Y Any distance 3" to 3 feet.

——— ——— Break in rail.

Diagram 2

Three-rail with insulated wheels.

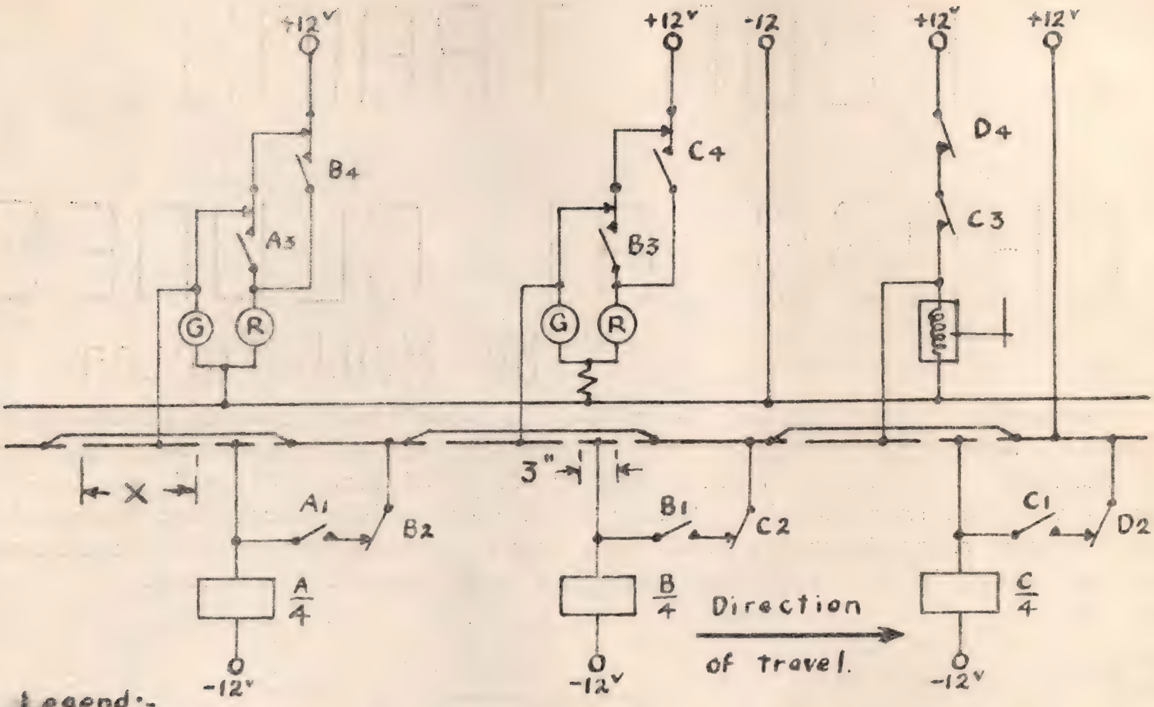
JT 10·6·61.

When the train passes point C, the C relay operates similarly. C relay locks via its own contact C1, and the normally making contact D2. C3 changes the semaphore to danger, and removes the power from the C centre rail section. C4 keeps signal B on red, and power off the B centre rail section, because the tail of our train is between B and C now. C2 unlocks the B relay which releases B3, which has no effect. B4 puts signal A to green, and power on the A centre rail section. A following train now may proceed to point B and acts accordingly on relay A.

Summing up: By means of the running rail sections, the trains operate the relays and the operation of one relay releases the preceding relay. A relay when operated keeps two signals at danger, and keeps the power off two centre-rail sections. Provided they are shorter than the shortest section, and no wagons have come unstuck, trains just cannot have a rear-end collision.

TWO-RAIL:

This system is very similar to the preceding one and uses the same relays and signal circuits. The obvious difference is that when a signal is at danger, power is removed from a section of the running rail instead of the centre rail. Relays are operated by the circuit between the two (or more) loco wheels on the right hand side. I think we can safely assume that all two rail locos have at least two points of power pick-up on each rail. Operation is



Legend:-

○ Lamps. G-green. R-red.

-ww- Radio resistor.

X The distance required to stop your fastest train.

—— —— Break in rail.

Diagram 3

Two-rail.

JT 10·6·61.

the same as for 'Three-rail with insulated wheels' if you substitute "right running rail" for "centre rail" in the description.

In conclusion, I hope I have made myself plain enough in this article. If not, I shall be most pleased to receive and answer queries on these systems or any extensions of them. I shall also be happy to assist any member who desires to adopt an automatic system, by providing circuits and other information or by assisting with the necessary purchases, or in the assembly and installation. Enquiries will be most welcome. Address them to me at 49 North Avenue, Bentleigh, S.E.14, Victoria.

WHAT IS IT?

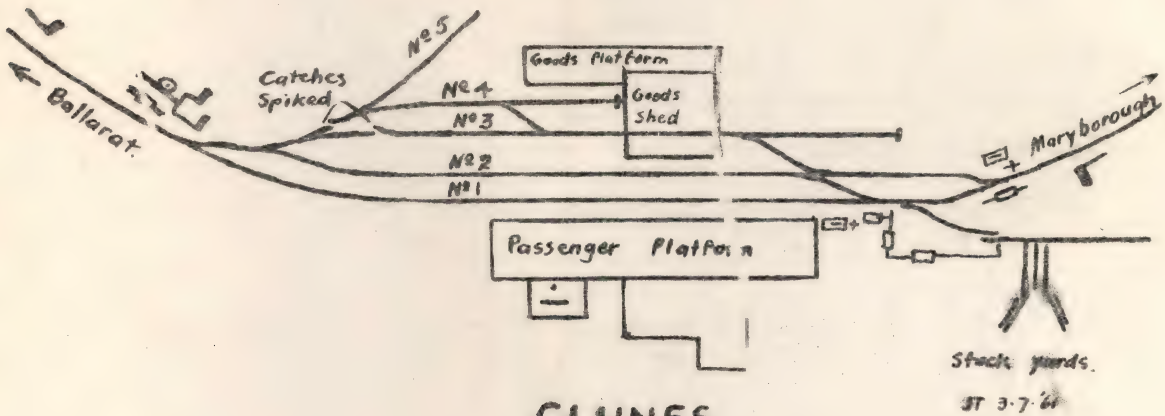
In Turkey there is a locomotive with a rather unusual wheel arrangement. Basically it is a 2-6-0 but a pair of carrying wheels are mounted between the second and third drivers. It defies accurate classification, as it is not a 2-4-2-2; 2-6-(2)-0 would be about the nearest you could get to it.

Ern Raddatz.

FOUR TRAINS CROSS AT CLUNES

by Keith Turton

According to the working timetable, a three train cross is scheduled on Tuesdays, Wednesdays and Thursdays at Clunes, half way between Ballarat and Maryborough. The trains involved are the Down "Mildura Sunlight", the Up 280 h.p. rail motor from Woomelang (Tuesdays) or Donald (Wednesdays and Thursdays) and the Down roadside goods, 8.40 a.m. from Ballarat. There are three roads at Clunes, and in normal circumstances one train occupies each road.

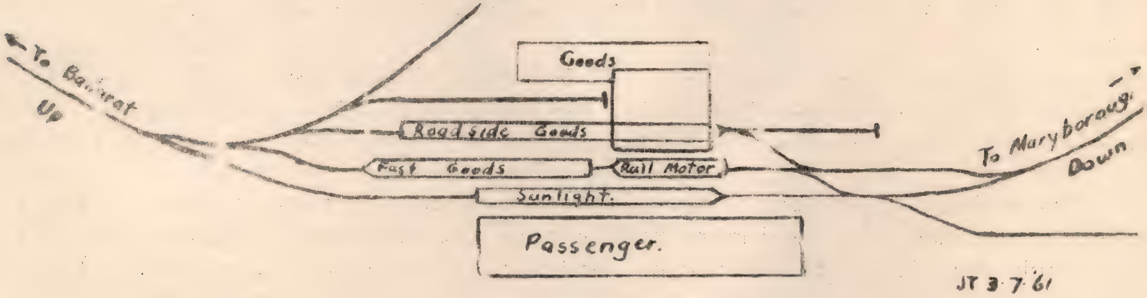


CLUNES

When the 9.20 a.m. fast goods from Maryborough is steam hauled, being slower, this also crosses the other three trains at Clunes and causes some interesting working which could be successfully duplicated in miniature. The latter train is time-tabled to be run by a B-class diesel-electric loco, but if this is not available at Maryborough, steam is used, and on many occasions it is double-headed. When diesel hauled, this train crosses the Down "Sunlight" at Creswick. A four train cross, as described above, took place on 11th March, 1960, and the working was as follows.

The first train in was the 8.40 a.m. Ballarat-Maryborough roadside goods, which arrived at 10.5 with twenty-six wagons, double-headed by locos of the A2 and N classes, and then shunted out two vehicles. Next was the 9.20 a.m. Up from Maryborough, also a double-header behind classes N and J, which arrived at 10.20 a.m. with a thirty-seven wagon through load. The 8.40 a.m. ran into No.3 (goods shed) road and out beyond the facing points, back to the main line on to the dead-end siding at the down end of the station. The 9.20 a.m. Up ran straight into No.2 road; the locos were detached and then ran forward and reversed into No.1 to take water. It is compulsory for all Up trains to take water at Clunes, except those hauled by R class locos. After this was accomplished both locos, still coupled together, returned to their train.

Next arrival was the rail motor from Donald (91 RM), which arrived at 10.45 a.m., two minutes late. This ran straight into the platform road and, after surrendering the staff, reversed and ran into the Down end of No.2 road, behind the van of the Up goods. Five minutes later, the Down "Sunlight", consisting of a B class diesel electric and three vehicles, ran through the platform road, slowing only for the staff exchange, as there is no staff exchanging apparatus at this location. When this train was clear, the rail motor reversed out on to the main line and ran forward, stopping at the platform to pick up the staff. The "Sunlight" was the first train to clear the section. At 11.5 a.m., the roadside goods set off for Maryborough and five minutes later the fast goods left for Ballarat.



JT 3.7.61

CLUNES — Showing trains crossing.

TELESCOPES OR TELEPHONES?

Broughton Boydell sent in this story. As far as he knows, it is true.

For years there had been an agitation to have radio telephone communication between the driver and the guard on the "Trans" trains, particularly the goods trains which may be up to a mile or more in length.

The Commissioner during one of his regular trips was riding on the loco heading a very long goods when the driver asked him if he could see what the guard was signalling.

"No" said the Commissioner "it is as much as I can do to see the guard".

"Well" said the driver "if I could not see what he was signalling or said I could not see it I would lose my job. Perhaps you now understand why we need radio telephone communication".

Evidently the Commissioner understood, as they were fitted shortly after.

YOUR QUESTIONS ANSWERED

BY THE EDITOR

The recent questionnaire gave members a chance to air their problems and grievances. Nearly all the points made concerning "Journal" are worth considering, so they are being dealt with in the form of a questions-and-answers column.

A.H.V.P. writes: "As a recent new member I think that occasional articles and advice on construction and setting up of layouts would be helpful to those who are beginners or contemplate starting a layout".
L.F.K. writes: "I consider there is not sufficient material of interest to beginners", and
G.F.G. writes: "I should say that, to one who has been modelling for most of his life, the ordinary constructional article, even those appearing in the two magazines from the U.S.A., are better suited to those beginning modelling".

These three questions may well be answered together because they all refer to the need for beginners for simple constructional articles on rolling stock and lineside structures and for simple layout diagrams. It has always been 'Journal' policy to remember that a large proportion of AMRA members are beginners and to try and include something for them. Unfortunately, however, the people who are most in touch with their own problems are the beginners themselves, and being beginners, they are apt to be diffident about contributing. However, there may well be more senior modellers who can remember their early days and can give us simple constructional articles specially designed for the beginner. It would be far better to have original articles by our own members than to reprint material from other magazines. Beginners also need help with their trackwork and their electrical problems and find conversion articles on proprietary equipment useful. One thing that all beginners should remember is that even by reading the more advanced articles they can often get ideas which may one day be of use to them.

Concerning prototype, historical and constructional articles a good many writers gave their views, many of which might appear at first sight to cancel out.

J.H.G., who prefers to buy books on prototype railways and historical subjects that interest him, would like "articles and plans of rolling stock and expecially of track work". His main interest is 'O' gauge and articles in Journal on "toy trains" and Hornby 'Dublo' are of no interest to him.
B.L.McC. likes constructional articles if they are well prepared and of general interest and likes historical articles where their direct relationship to modelling is apparent.

R.B.G. says of prototype and historical articles: "Yes, if given a model slant."
W.H.S. says: "Yes",to constructional articles if they are not too "basic" and
D.J.B.H. says: "I would like more construction articles on narrow gauge."

Our first group of questions and answers concerned the beginners. Here now is a set for some of the more experienced modellers.

To the man who says "I prefer to buy books on prototype and historical subjects that interest me" I would say: "By all means do that, especially if you know what you want; I do it myself and have quite a large railway library". But buying books costs money and not all members are prepared to do that; on the other hand most people are willing to read prototype articles, even those not having a "modelling slant", provided they are interestingly written and have the effect of widening the reader's horizon. I agree, though, that to be really appropriate a prototype article should have at least some modelling application and care has been taken with recent prototype and historical articles to see that this is so.

We definitely need articles on constructional subjects, with plans and diagrams to scale. As far as narrow gauge is concerned, we already have a fairly wide coverage of 3'6" gauge modelling, especially as it affects the QGR. True narrow gauge, namely the 2'6" gauge lines and the 2'0" gauge tramways, has a somewhat limited, but nevertheless very keen, following, and has not been forgotten. Watch out for "Watch out for Trams"!

The plight of the '0' gauger is well known and I hope some relief is in sight for him. As far as Journal is concerned, the page size is the limiting factor for plans and drawings. The result is that the '0' gauger must often be prepared to scale up his drawings. To help him here we now make it Journal policy to ensure that drawings contain prototype measurements.

Pursuing the prototype and historical versus the constructional theme a little further, we now have opinions from another series of readers where we find that ideas even on constructional subjects vary considerably. For instance:

M.M. states quite boldly: "There is too much prototype and not enough on modelling articles or experiences", while
F.W.M. states: "Sometimes the articles are not on modelling, but I think that gives added interest".
W.A.A. wants constructional articles, "particularly lineside structures".
J.D.N. has no interest in anything Continental but would like constructional articles on Australian prototypes.
J.A.G. says: "I would like more articles on building models of Australian locos, rolling stock and lineside structures."
H.R.R., who complains that Journal does not have enough "meat", likes prototype articles occasionally, "particularly NSWGR".
R.E.M. (a Victorian) says: "I would like more details on local railway activity and I like prototype and historical articles if these are on local subjects. I have no interest in articles on overseas railways as these are covered elsewhere".
R.R.A. supports him by saying: "I would like to see more constructional articles in the Journal on V.R. rolling stock. I feel there is too much bias towards the NSWGR.

J.C.L. says: "More constructional articles? Definitely, particularly V.R.
Finally,
J.H.P. puts in a plea for "more passenger stock drawings".

I freely admit that some articles and drawings on V.R. rolling stock would be welcome. Will somebody send some? I would rather have more V.R. as well as, not instead of, NSWGR and QGR material.

Passenger stock drawings are unpopular with editors because to do the job properly it is usually necessary to publish plans for a whole train. We did this for the Newcastle Flyer in November 1958, however, and would be prepared to do it again if anyone came forward with a set of drawings. Even the odd guard's van drawing could be printed if someone sent one along.

So, now, on we go with another batch of critical comment. If any of this leads to some spirited "Pop Valve" correspondence, I shall consider the effort amply repaid.

J.T. says: "It is a pity the Journal cannot be sent out on time, although I thoroughly realise the task of editing, printing etc".
J.P. says: "In general articles in Journal are too long and prototype and historical articles tend to go into too much detail. I think Journal would be improved if there were more and shorter articles".
C.E.R. (whose remarks probably are not for publication) makes no bones about the matter: "Journal", he says, "is achieving the impossible; it is stagnating and slowly rolling backwards at the same time. If you mean historical articles on model railway history, I am in favour of them in moderation, but on prototype matters, the answer is very definitely NO!"

Well now, even articles on model railway history creep into the pages of Journal from time to time, as you will see if you thumb through some of the back numbers, but I didn't think when I put them in that anybody would be interested!

Regarding the suggestion of shorter articles, and more of them, I am afraid it isn't possible to do much about that unless we get them sent that way. The larger articles could of course be split up into several parts, but that isn't really such a good idea; articles in serial form might have to wait nine months for completion. Only if we had a monthly Journal would that arrangement be possible and believe me, meeting four deadlines a year is difficult enough, let alone twelve. At least we have managed to get Journal out on time again after a whole year of being a month behind by the united efforts of all concerned.

Here now are some suggestions from readers who feel we could improve the presentation of Journal:

J.D.N. says of Journal: "I think it is excellent, but it would be better if photographs were published once in a while similar to those in the ARHS bulletin".
D.M. says: "When the membership grows, print the Journal. Punch holes in the edges to permit binding".

W.G.B. also thinks that the Journal should be printed even at the expense of increasing the subscription", and

R.H.F. says: "One suggestion I would like to make in regard to Journal is either to punch the marginal edge so that the individual journals can be filed in chronological order, or else produce for sale to members a low cost hard back binder which will take either twelve months or two years complete copies of Journal and Buyers' Guide".

The question of publishing photographs is under consideration and you will have noticed that we tried out a sample run in last November's issue, which wasn't very satisfactory. The photographs there were converted to stencils and were duplicated just like any other form of art work. If we can afford it we may find we get better results by using proper blocks and special paper for, say, a page or two of photographs in each issue, but expense is bound to be the deciding factor just as it is with printing the Journal. We worked out about a year ago that we would need a circulation of about a thousand (instead of the present three hundred) to make printing an economical proposition.

Binding the Journal isn't difficult. The method I use myself is to get hold of a quarto size two-post "Filerite" cover, which costs about 7/6. I then carefully unstaple the Journal, punch the pages, restaple, and can then store eight Journals and the two indexes that go with them comfortably in each cover. I bought myself a small paper punch and a small stapling machine (which have a hundred other uses) for the purpose. The Buyers' Guide I store in a spring back cover until it is full; I then throw out the older ones to make room for more. I do not think it is a good idea though to send the Journal copies out ready punched. In the first place a lot of readers might not like it that way, secondly, it has to be done carefully and so much extra work would greatly overburden the collating and stapling party.

".....A LITTLE OVERCROWDED ISN'T IT?"

Here now are two questions for readers interested in reprinting articles:

G.E.B. leads off by saying: "Is it possible to reprint articles from European books and magazines concerning railways?" and
I.V. asks: "Do articles in Journal come under the Copyright Act? I've had an idea to write a construction article for the "M.R" for some time and have actually got it started. Could it be printed in Journal and then later in the "M.R" (if accepted) without causing any consternation?"

Well now, articles in European books and magazines would presumably be written in foreign languages, so there would be the translation difficulty for a start, but apart from that I feel that we have enough members with expert knowledge to be able to publish original articles ourselves. It is true, we do reprint articles from time to time, but unless we are really stuck for material, these articles are usually only short ones. The only long reprints come from the very early issues of Journal when some very good articles were published but only reached a very small circle of members.

As far as copyright is concerned, there does not seem to be any very rigid rule although I would say that any paper paying cash for an article would feel it had a right to the article as its property. Usually, the staffs of model railway newspapers and journals wish to co-operate with their contemporaries, and provided permission is asked and acknowledgement is made, reprinting is quite in order. It would however, be unethical to submit an article simultaneously to two papers having much the same reading public without at the same time letting the editors concerned know exactly what was happening. They could then decide between themselves which would handle the article.

I was most interested to pick up a copy of the 'Australasian Post', dated 10th November, 1960, and to read there a short article entitled "Old Puffer is a worry for railmen", in which the fate of the QGR A10 locomotive and its two carriages was discussed. Imagine my surprise when the same article, with the same photographs plus a little extra technical detail, appeared in the 'Model Railway News" last February and blow me if it didn't crop up again in the 'Booster'! So you can work that one out for yourselves.

Naturally readers are most interested in articles on their own pet subjects, and no exception to this are the modellers following Continental and American practice as shown by the next series of remarks:

L.A. for instance writes: "I am personally interested in Continental Railways such as German, Swiss, French, Austrian and Italian Railways. If possible I would appreciate more material on these. I am also aware that this may not suit the majority of members. Is it possible to canvass in this direction?"
R.F.T., alsosimilarly inclined, says: "The prototype articles I liked best were Ivan Laszlo's articles on the Continental expresses and railway systems".
P.K.J., who is interested in American railways, says: "I read all of it, but usually there is no item of particular interest or application to my railroad" and
C.P.C. says: "I am only interested in articles on American prototype".

We have several members who hale from the Continent and most of them prefer the railways of their homeland for modelling; we also have a certain number who have gone Continental because they were introduced to the hobby through Marklin or Fleischmann equipment. Articles on Continental railways are bound to be useful and interesting to modellers in both these groups. Incidentally, the fact that Ivan Laszlo won the contest for the most popular article of 1960 with "Continental Motive Power" proves that his articles are popular generally with readers.

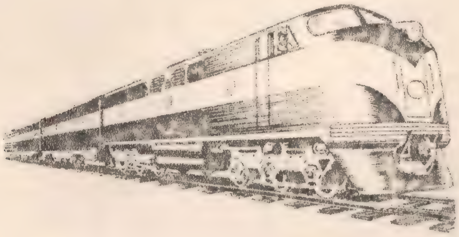
As far as American railways are concerned, the situation is somewhat different; we could certainly use some articles, especially if they dealt with operating conditions, so as to help owners of, say, Rivarossi equipment to operate their trains correctly, but most scratch builders of American rolling stock already belong to the NMRA whose bulletin keeps them well supplied with constructional material. Anyhow, the plain fact of the matter is that no one has sent me a constructional article on a Burlington 2-8-2, a Denver and Rio Grande caboose,a Nebraskan grain silo, or a Maine two-footer, so that's one reason why the Yankee fans haven't had an article in Journal yet.

Here, finally, are opinions from three members, which are included without comment as they convey their own message, especially to the prospective contributor to Journal:

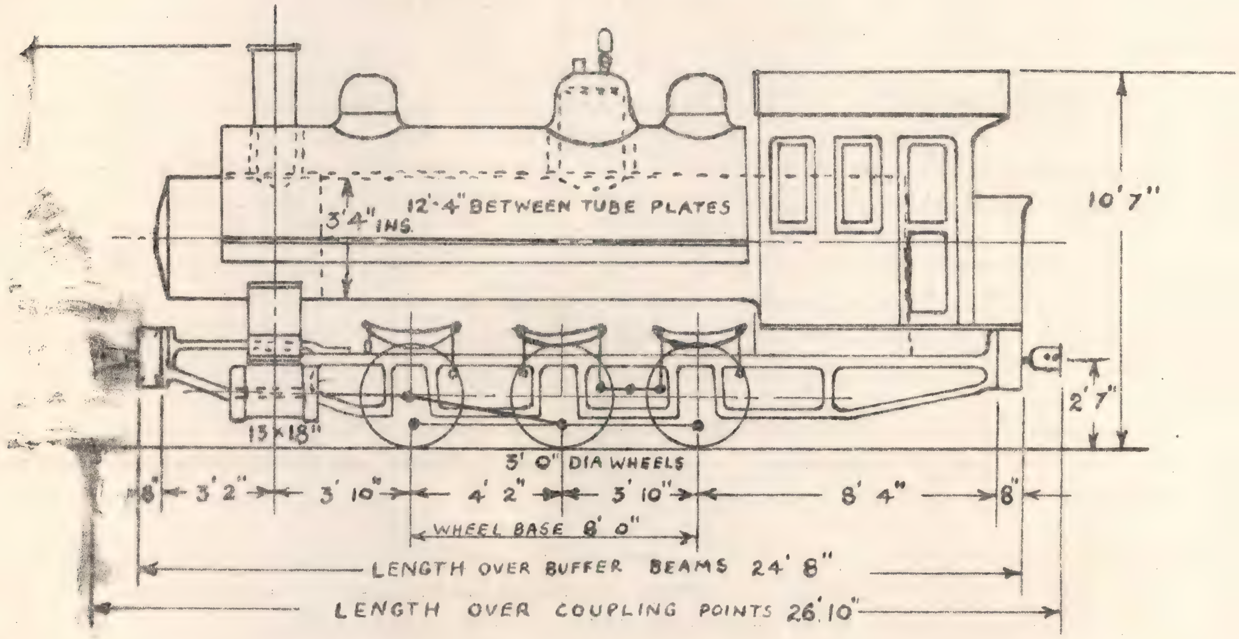
R.W.N.S. says: "I am mostly interested in articles on construction, wiring diagrams and descriptions of other members' railroads. I read the lot and latch on to anything 'O', otherwise it's just reading matter".

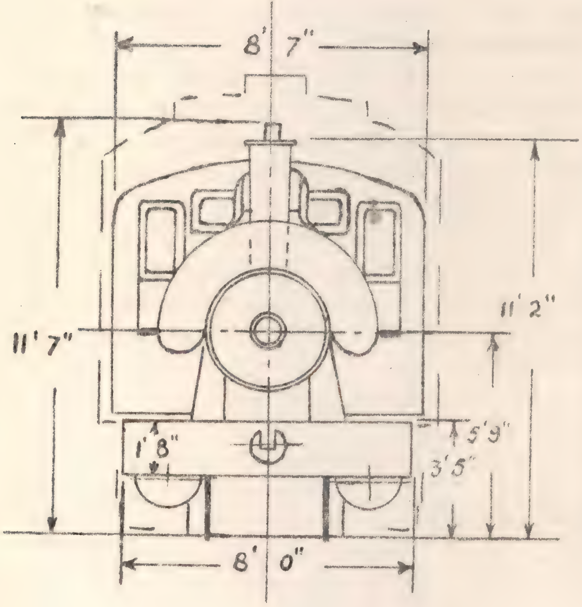
R.B.G. says: "I would like to see more descriptions of layouts. My Journal preferences are 1, descriptions of layouts; 2, news of club doings, fan trips and Federal meetings; 3, prototype articles with a model slant - plans are always interesting; 4, historical, and 5, constructional".

M.J.M. writes a long one: "More layout ideas", he says, "would be useful to me, such as articles on the interpretation of signalling, on track laying, on point construction, on isolating points in 2-rail and on automatic point operating; also articles on my pet theme of the moment - conversion from 3-rail to 2-rail in 'O' gauge. Topics which must cause modellers some headaches are the ideal radius in 'O' gauge, the amount of banking on curves for main line express scale speeds,the home manufacture of remote control switchboard layouts, wiring connections, rheostat applications and the merits, or otherwise, of couplers, both automatic and manual. Painting of scale models has many pitfalls, and articles on this subject might help".



0-6-0 Locomotive Class NB


12'-4" BETWEEN TUBE PLATES
3'4" INS.
10'7"
2'7"
13×18"
3' 0" DIA WHEELS
8" 3'2" 3' 10" 4' 2" 3' 10" 8' 4" 8"
WHEEL BASE 8' 0"
LENGTH OVER BUFFER BEAMS 24' 8"
LENGTH OVER COUPLING POINTS 26' 10"



Commonwealth Railways
3' 6" Gauge.
0-6-0 Locomotive.
Class NB.

Locos of this type are also in use at Fyansford, Vic. and at B.H.P. works at Newcastle and PT Kembla, N.S.W.

Scale:- $\frac{3}{16}$" = 1' 0"

JT 17·6·'61

GROVER'S BOGIES

BY ARTHUR HARROLD

A reference to Grover's Bogies in "Pop Valve" by Ern Raddatz not so long ago has reminded me that I never answered Leslie Poole's query on this subject in a previous issue.

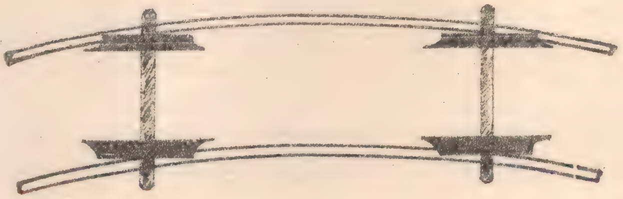
At the Queensland Branch's last Christmas break-up party I put the questions to Mr. Castely, who is C.M.E. of the Q.G.R., and to Mr. McKennariey, neither of whom could say who Mr. Grover was, but both of whom agreed that the bogies "worked" as follows: At the entry to a curve the leading pair of wheels, which is able to rotate on its pivot point, is guided into the curve by the flanges on the wheels, while at the same time excessive rotation is prevented by the tie rods which cross diagonally between each pair of wheels.

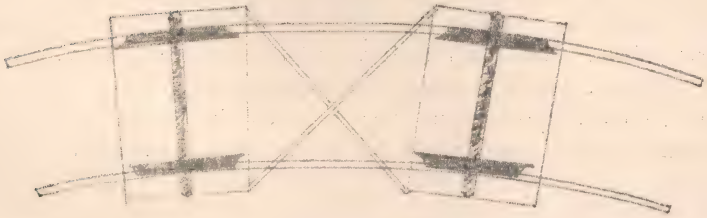
These tie-rods, being in effect the diagonals first of a rectangle, and then of a regular trapezium, also cause the following pair of wheels to assume a curve of identical radius, and therefore allow the wagon to steer easily round the curve. Presumably it is theoretically necessary to have transition curves at the entry and end of each curved section, otherwise there would be binding; however, in effect there is sufficient gauge difference between the wheels and the track to avoid this, otherwise fixed wheel-base four wheelers could never negotiate curves at all.

Modelling Grover's bogies is not difficult; it is only necessary to prepare two pieces of brass by drilling them at their pivot points and at two of their corners and then to solder axle guards in pairs on to them. The tie-rods can be made of steel or brass wire turned down at the ends to pass through the corner holes. They must of course be allowed to move freely in the holes and against each other. It is not necessary for the couplers to be attached to the bogies.

That Grover's bogies are effective was shown without any doubt by a model I made some years ago which had a $2\frac{1}{2}$" wheel-base which was able to negotiate 6" radius curves!

FIXED WHEEL-BASE FOUR-WHEELER ON 6" RADIUS TRACK





FOUR-WHEELER WITH GROVER'S BOGIES ON 6" RADIUS CURVE

IDEAS ON 0-6-0 LOCOS

by IVAN LASZLO

When the AMRA Federal Committee suggested to me that I should write a loco constructional article for the guidance of members wishing to enter the loco building contest,they asked me to be sure and describe one which had seen service in Australia. Unfortunately, events have occurred which now make it extremely unlikely that I shall be able to construct any locos myself, other than 'Kitmaster', this year. However, my promise to write the article must be kept, so I have chosen as my subject the NSWGR Class E 17 loco. This was an 0-6-0 goods class loco, built between 1865 and 1867 and finally scrapped in 1942. Although I have not modelled it, it is an interesting loco for many reasons. It is a genuine Australian old-timer. The first of the class were imported, but later additions were built in Australia, being among the first locos built in this country. In addition, it is a goods engine of simple proportions, able to perform a multitude of duties, which should be welcome on most layouts.

Drawings of the loco are shown in Figs. 1 and 2. However, it must be understood that the drawings have been made from photographs and are not to scale. Anyone requiring accurate outline drawings should obtain them from the NSWGR Publications Section, York House, Wynyard Square, Sydney. This article is really intended as a general guide for those members wishing to build any type of 0-6-0 loco, rather than the E17 actually chosen as the subject. Should you choose a loco for which accurate drawings are not available, there is a method of preparing working drawings from photographs,which you will find described in an earlier number of "Journal" (May 1959). However, even when drawings are available, photographs are always a help in showing details and should always be obtained, where possible.

The first step in the construction of any loco is the underframe, which has been described in my article in "Journal" (February 1960). However, I am going to make several unusual suggestions in regard to this part of the construction. After you have cut out the main frames from either brass or bronze, but not steel, they can be sweated together. It is a good idea at this stage to cut out blanks for the side rods and sweat them to the main frames so that they can be drilled at the same time, thus ensuring that they are drilled to the same centres as the main frames. Mark out the wheel centres, and drill each with a No.50 drill so as to give clearance for the 10 BA bolts which are to hold the side rods, then unsweat the side rods from the main frames. Next,

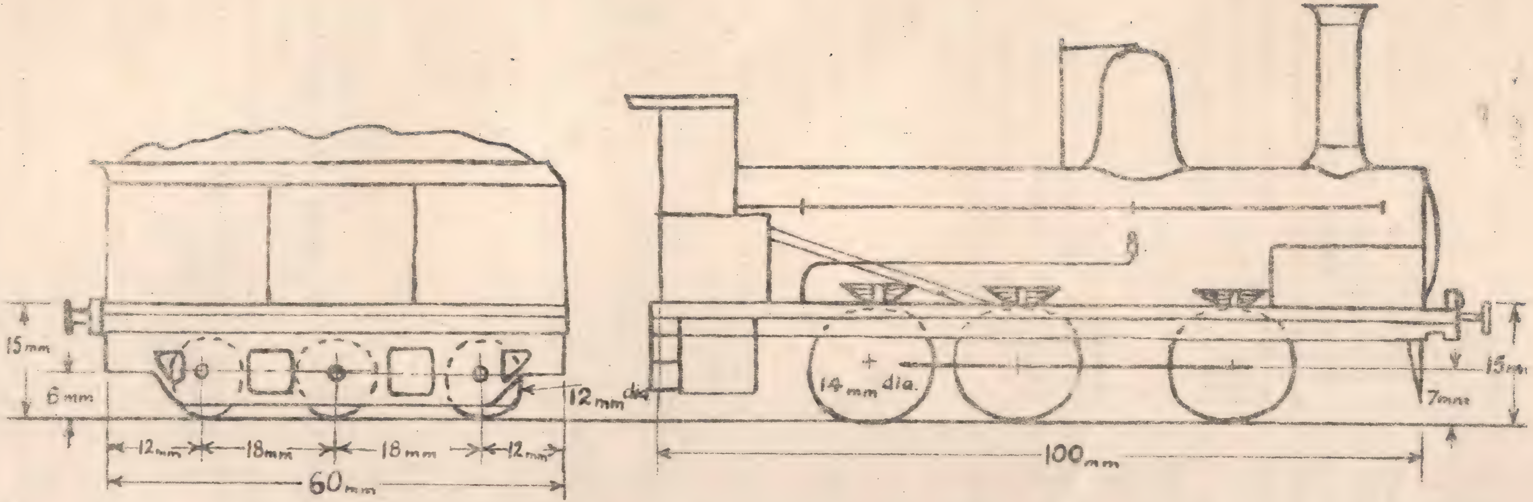


FIG. 1. Side elevation NOT TO SCALE

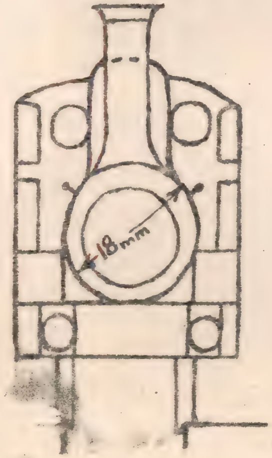
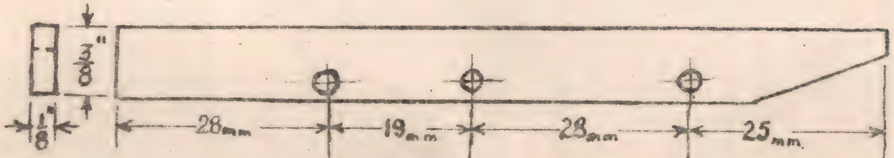
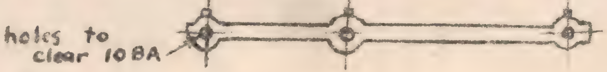


FIG. 2. Front elevation
NOT TO SCALE

Side Frame





Material:- 1/4" Brazing strip or nickel silver strip.

FIG. 3. Coupling Rod

CLASS E 17 NSWGR

drill the main frames 7/64", then setting to work with the largest size watchmakers' broach, which costs about 2/6, open out the holes until you have an easy fit for an 1/8" axle.

Don't worry if your holes are slightly over size, as modern science can come to your rescue. If the bearings are sloppy, obtain a sample tin of "Loc-Tite" (cost 1/3) from Bearing Services Pty. Ltd., Sydney, slip in any smooth, turned rods of $\frac{1}{8}$" diameter, and squeeze a little "Loc-Tite" into the bearings. Line up the rods, making sure that they are square all round, and especially that they are lined up along the tops of the rods, then set the frames aside overnight to harden. When set, withdraw the rods and proceed to fit the axles. I suggest that you use Romford 14mm drivers, which, although 'TT' drivers, are the right size for this goods loco. Insert the axles and fit the wheels. The axles will probably be a tight fit, but sprinkle them with kerosene and turn the wheels by hand until the axles turn freely in the frames. This may be a long job but it is better than burning out a motor.

The next step is to mount the motor. For a small loco of this type, I suggest that you use a "Triang" 'TT'-sized 'XT60' motor and mount it in the smoke box. Alternatively, a "Triang" 'HO' motor could be mounted in the cab and firebox,but the 'XT60' is easier to mount as it has three mounting points. Having mounted the motor, test the mesh between the worm and pinion, first of all without the wheels to make sure that there is no binding. Drill and tap the wheels for 10 BA bolts with a No.55 drill, then shape the side rods which you have already drilled with pilot holes to the correct centres and attach them to the wheels with short countersunk head 10 BA bolts. Then when you are satisfied that all is well with your motorised frame, set it aside and get to work on your loco body.

Start with the footplate and the valences, which could be made from 1mm ply or some thin, hard plastic. Mark out and cut the motor access, mark out the positions for the boiler and cab, then stick on the footplate and valence plate with 'Araldite'. Springs could be made from balsa strips cut to the width of the various lengths of the spring leaves,glued together and, when dry sliced off in short lengths (approx. $\frac{1}{8}$"). They could then be fixed to the top of the valence plate with glue and pins, cutting off the surplus pin below the plate. Any cellulose type glue could be used for this purpose, but not latex glues like 'Pliobond', as they are not rigid enough for the purpose.

The boiler could be made from a piece of brass tubing, but not of wood or shim brass, as weight is required. A good material for boilers is rigid PVC tubing made for irrigation purposes, providing that the correct cement is used. I obtained a 3 oz. tube from Bingham Bros., Annandale, Sydney, This cement is excellent for gluing perspex and many other plastics. The steam dome and funnel will probably have to be your own work. Take a short length of dowel, bore a hole in one end to take a No.8 1" wood screw, drive in the screw and cut off the screw head. Place the shank of the screw in the chuck of a drill, fix the drill in the vice and proceed to "turn" your parts by rotating the dowel in the drill and rotary-filing the dowel to shape. You may need some practise at this, but if you spoil the first couple of pieces, little material is lost.

When the required pieces are turned to shape, fill up the pores with wood filler and prime them with wood primer, using several coats if required. They can then be finished off with "brass" or "bronze" paint. Obtain your paint in powder form from an artists' supply store and mix the powder with clear latex PVA paint. By experimenting a little, a nice brass finish can be obtained which does not look "painty". While the paint is drying, cut your boiler tube a little long and trim the ends off square. Glue the funnel and steam dome on with 'Araldite'. For the smoke box front, you could use a plastic "button-day" button, which could be glued to a thin slice of wood trimmed to size to fit the end of the boiler and decorated with pin-heads. That just about takes care of the boiler and its fittings.

For the cab, cut two sides and a spectacle plate from 1mm ply and glue them together with 'Tarzan's Grip', holding them together with pins until the glue sets. The roof could also be made from ply, but card would be easier to fit to the curve of the sides, providing that you strengthened the card with ribs; one carved to the shape of the roof and glued at the rear and the other a straight rib glued between the first rib and the spectacle plate. Make the ribs from balsa, keep them thin and paint them the same colour as the inside of the cab and they won't be noticed. The two side boxes could be made up from square sectioned wood, carefully sanded, filled with pore-filler, primed and painted.

Before glueing the cab on to the boiler end, try to get as much non-metallic weight into the boiler as possible. I use 'Spackle' or plasticine; both are good but plasticine can always be removed readily whereas 'Spackle' is hard to remove when set. The buffer beam can be made from wood and is in any case made of wood in the prototype. Buffers can be bought if required but I use bifurcated rivets, which although over scale are much cheaper than buffers. Rivets can be filed down or turned down and should be metal primed before painting.

For a wash-out plug,you could use a ball point pen nib with a small piece of nylon fishing line glued to it. To get the correct right angled kink in the fishing line place it in a jig made from three pins pushed into a board, heat it up by holding a soldering iron near it for a minute and allow it to cool before removing it from the jig. The nylon should now retain the right angled bend. Reversing gear, fitted to one side only, can be made from card and painted black. Prime all wooden and plastic parts with wood primer then paint them black. I have found that 'British Paints' PVA satin black tinter is excellent, as it dries quickly and can be finished off with egg-shell or flat varnish as required.

For the tender chassis, shape the sides from three-ply, drill for Peco axle cups, and glue to a block of wood cut to the correct width. This block would have to have slots cut in it to clear the wheels. Cut a valence plate from 1mm ply and glue it to the tender chassis. Make the tender body up by shaping up a piece of wood for the tender shape, including the coal, then glue on the sides and back cut from 1mm ply. Add the buffer beam and buffers, together with tool box, etc. as required, then paint as required. It is as well to keep in mind that small details, such as hand rails are quite effective if painted on after the main paint job is thoroughly dry. Alternatively, a small 'Triang' tender, similar in size could be used, with a new paint job and added accessories to make it look the part.

Pick-up could be arranged by using wheels on one side of the tender and the other side of the loco, if required. Another point to be watched is that this loco might not handle sharp curves unless the centre drivers are flangeless. These are obtainable from "Pacemaker" at Albury. If flangeless drivers are used,be sure and drive on the first or third axle, not the centre one.

FICTION !!

WHO WOULD STEAL THE STAFF ?

by Jack McLean

This story is dedicated to those maligned gentlemen, the traffic inspectors, many of whom have gone out of their way to show us what makes the railways tick. I don't think that the one I knew in the Launceston area of the Tasmanian Government Railways was named Nick and I hope that the stationmaster at Conara Junction won't mind the trouble he is put to in this story. I do hope that they, and any enthusiasts who have visited the fascinating railways in the Island State, will recognize a serious attempt to paint a picture of some of the details of railway operating there.

One miserable afternoon just after the war Conara Junction station stood defiantly in the pouring rain. One of the few signs of life was a dejected looking porter who peered out into the gloom and thought about cold fronts and other meteorological phenomena. He was not sufficiently interested to notice the heavily scarfed stranger who took refuge under the dripping verandah for had he done so this story would not have been written.

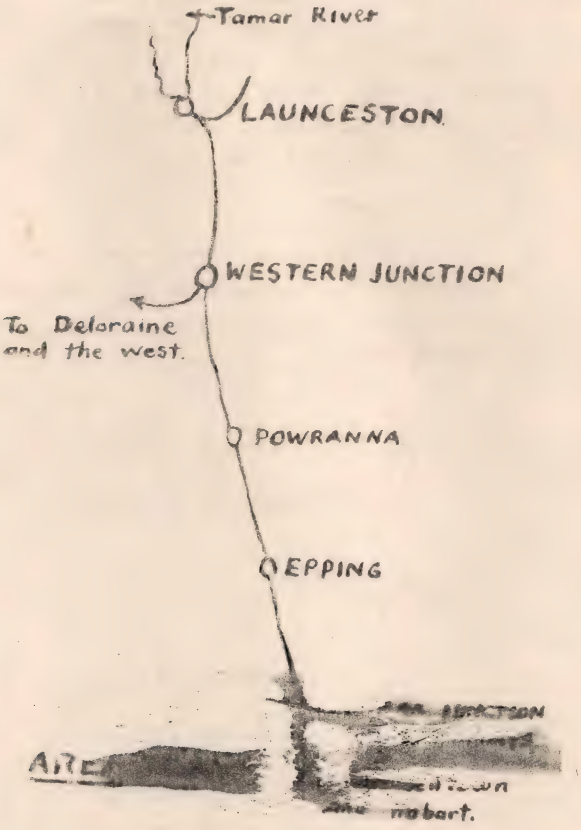
At about a quarter to five a special cattle train swung into the platform and without pausing left for Campbelltown. As it left the porter leaned against the door of the stationmaster's office and asked "How's 50?" 50 of course was the 12.50 goods from Parattah. "She's doing all right" replied the SM," but I don't expect that she'll get any further than Epping for the Hobart and the St. Marys motors. And there's that E box wagon they've got to pick up there too".

At 5.15 No.50 came toiling in from the south and a saturated porter turned the T class with its long string of perishables and general merchandise into No.3 road where it proceeded to sort out the yard and attach some trucks of coal. All this took a considerable time and it wasn't until almost 6.0 that 50 was ready to go and the fireman came over to the office to get the staff. But it couldn't be found, although the SM maintained that he had put it on the table just inside the door when the stock special had gone through. All the same, it was certainly nowhere to be found now.

Just as they had discovered this loss a bloke from the Transport Commission burst into the office and said excitedly "Some joker has pinched my car". So the SM got on to the Control phone and told him the sad story. No one of course had noticed that the heavily scarfed stranger had also disappeared. Shortly after, the fireman rejoined the engine carrying a white form and left the SM on the platform muttering "I can't understand it, I've never lost one before".

Traffic Inspectors are not a happy race. Because of the very nature of their job, they are constantly viewed with disfavour and are the subject of numerous telephone calls urging the listener to "watch the next on the down". Whatever else they said about old Mick they grudgingly admitted that he was fair and when anyone got a memo he usually admitted that he had deserved it. But Mick was really worried. Apart from all the usual troubles of running a single track railway bristling with trains and a train graph that looked like a spider's web, they were short of coal and short of engines and short of men, particularly trained men.

And now on top of all the rest there was this increase in pilfering. At least that's what it was called. Some of the things that had been stolen almost put it into the class of grand larceny. All the obvious instructions had been issued in the Fortnightly Notice about ensuring that truck doors were locked and not leaving any small items unattended - but to little avail. It seemed that an expert was on the job.



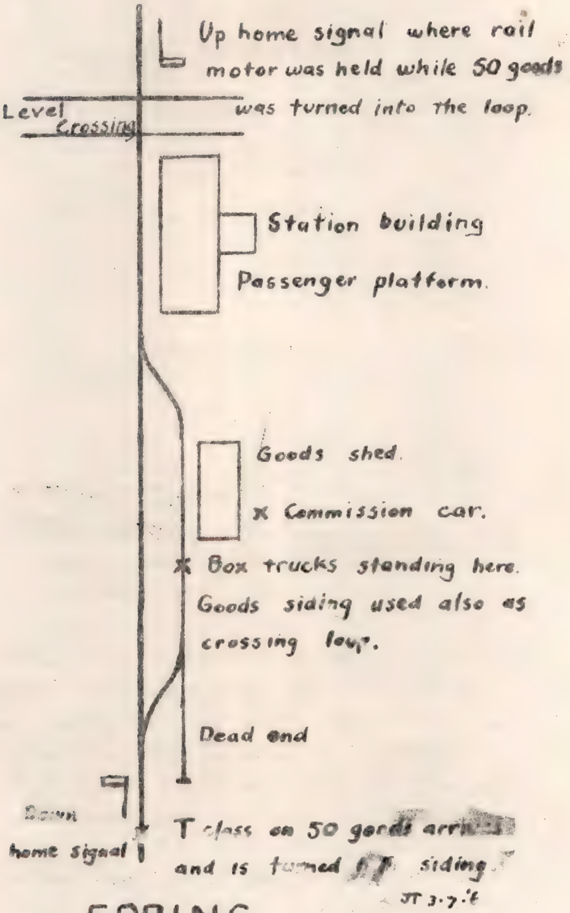
Only last week a louvre truck had been broken into while the rear portion of a stalled and divided goods train was standing near Moltema and the front portion was being taken into Dunorlan. That was only two days after the Railton Junction office had been broken into while the Safeworking Porter was turning a train into the Latrobe end of the crossing loop. Yesterday a valuable consignment had been stolen from the van of a goods waiting at the home signal at Bishopsbourne.

It certainly looked as if the thief was a railwayman as his accurate knowledge of railway operating peculiarities had enabled him to plan all these coups successfully. Geographically he appeared to be working towards Launceston and might soon try the main line. Mick had just finished inspecting a new signalman in the box at Western Junction and was listening in on the Control phone waiting for a break in the interminable conversation when he heard "Conara Junction Urgent The Epping staff has been stolen. Can I have a Proceed Order for No.50 Goods?"

Incredulous Control of course wanted to know how he knew it had been stolen and was told how he had put it on the table and how the Transport Commission car was missing too. So Mick, instead of boarding No.26, the Western Line passenger, swung aboard No.121 Railmotor, the Evening Service.

Epping station was no drier than could be expected after an hour of continuous rain. The lamps flickered behind the spectacles of the home signals, both of which were showing red lights. The shrill call of the horn of the rail motor was ignored by the SWP who whistled a tune as he slammed the door and, lamp in hand, walked along the main line to the up end points to let No.50 into the loop that sufficed for a goods siding as well as a crossing loop.

As he passed two box wagons the SWP wondered if they had been moved but he couldn't see if the brake levers were up as they were on the other side. The fireman would attend to that when 50 went into the siding but he intended to have a look at the box wagons later. Around the curve soon came No.50 down the 1 in 500, dimming its headlight as soon as the adverse home signal was


Up home signal where rail motor was held while 50 goods was turned into the loop.
Level Crossing
Station building
Passenger platform.
Goods shed.
x Commission car.
x Box trucks standing here.
Goods siding used also as crossing loop.
Dead end
Down home signal
T class on 50 goods arrives and is turned into siding.
JT 3.7.'6

EPPING

seen. By the time it had covered the intervening half mile the SWP had thrown the cheese knob of the main line points and also unlocked the points of the up end dead-end siding. The thundering engine called for the home, he swung a green light from his hand lamp and cleared the home signal from the adjacent lever. The whistle called again in acknowledgement and the porter waited as the engine slowly drew its shuddering load into the siding. When the van was clear he released the home, threw back the cheese knobs, noted the flickering tail light and made his way back to the station.

Mick was impatient to get to Conara Junction and as soon as 121 stopped at the home he dropped from the door of the rail motor and made his way down the track. The driver had of course turned out his headlight. "Hope he breaks his neck", he said cheerfully to the guard. But Mick walked on, and as he came past the locked office he very nearly fell over the SWP's motorbike.

Whose then was the car behind the goods shed? He walked silently over and peered in. And there on the seat was THE MISSING STAFF. This was obviously the stolen Transport Commission's car. So he quietly raised the bonnet, lifted the distributor cap, pushed it aside and as quietly replaced the bonnet.

He had very little time to hide in the shadows for as the T class clinked the buffers of the box wagons he heard a muttered oath as a man came flying out of one of the wagons, making for the car. He said a few words when the thing refused to start and climbing out hurriedly he made a run for it with the fireman from No.50 goods running close behind him. He approached the corner of the shed when a figure shot out and dropped him cold. Before carrying the body into the office the methodical TI collected the staff from the seat of the car and made sure that the Proceed Order had been collected from the driver of the goods.

The up home was cleared for 121 and its driver was given a pink ticket and shown the recently found staff to go on to Conara and the motor departed for the Junction about 10 minutes late. The St.Mary's motor was now of course approaching Powrenna and so the SWP got on the station-to-station phone and gave Powranna the clearance for the Hobart motor.

As they waited, the body came to and was asked a few questions by the TI. "For a start", he said, "How did you know so much about train running? It was obvious you knew just where the trains would stop and for how long, and when the station staff would be away from their offices". The reply was not surprising. "Well, I used to work on the railways on the mainland until I thought that rifling goods trains looked such a pushover". "But what was the idea in taking the staff?" said Mick. "Well I thought that it would delay the down goods and give me time to get at that truck. I thought that the pilotman would be the SWP here at Epping which would give me a clear run. It didn't surprise me to hear the rail motor at the home but when I heard the goods whistling I knew that something had gone wrong".

"Well" said Mick, "I suppose that must be why you were caught, because we use Proceed Orders on Staff and Ticket here in Tasmania and they don't on the mainland". He picked up the Control phone: "That you Joe?" he called informally when there was a break in the talk. "Mick here. I'm at Epping. For the benefit of your little graph, 50 - in 6.24, 121 - in 6.26, out 6.36. Epping-Conara Junction staff found. Commission car found. Pilferer bloke who has been causing us bother tied up ready for the police. Now I can get back to my real job - running trains.

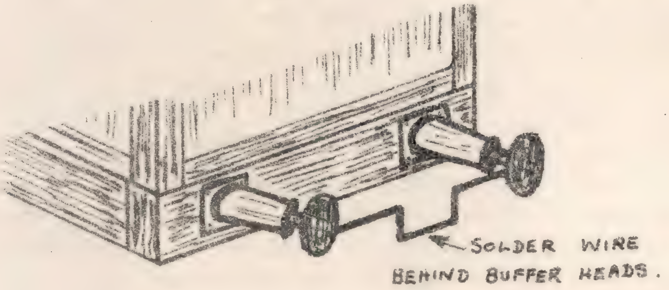
HANDIKINKS

Do 'TT' enthusiasts want structures? The well known Faller 'HO' city kits are built to a scale of 1:100 which is correct scale for 'TT'. This scale is also used for the Faller "River Kwai" bridge and also for the Faller background houses, although only the church in this group is suitable for Australian layouts. 'TT' and '000' enthusiasts should also study the cutout buildings printed on certain cereal packets for some of these can be used.

Ern Raddatz.

Some modellers who would otherwise like to use them avoid hook and link couplings with older types of rolling stock because of buffer locking. This can easily be overcome by fitting a cranked piece of fine wire between the buffers. Either nickel-silver or brass wire can be used and the finer it is the less noticeable will it be. The crank is necessary to avoid the coupling.

Broughton Boydell.



Instead of bending over and sighting rail directly by eye, use a small unmounted mirror held at a sharp angle to the top of the rail. This method will allow you to detect crooked rail easily, and the mirror can be blocked into place while the rail is straightened.

A small piece of paper rolled into a funnel with a small hole at one end makes a nifty ballast spreader. Hold the funnel near the smaller end as you would a pen or pencil, then pour in a little ballast. Gently roll the funnel between thumb and forefinger allowing the ballast to trickle from the small hole on to the prepared road bed.

To keep both hands free when using a magnifying glass for close work, tape the handle of the glass to the flexible spout of an oil can. The spout permits adjustment of the glass. Weight the can by filling it with stones or water.

John Newell.

BRANCH REPORTS.

THE 'OLD VIC' - APRIL AND MAY 1961

The April meeting was the first one presided over by the new Organising Chairman, Jack McLean. It opened at 8.0p.m. sharp and Jack addressed the meeting and advised the policy of a two-man committee during their term of office, with the object of making the hobby as enjoyable as possible.

Models displayed by members included the 'Airfix' mineral wagon and 10-15 ton diesel crane, which would shortly be available in the shops. Of interest was a transistorised speed controller, which will eventually form the subject of an article in Journal.

The syllabus item was given by the Chief Civil Engineer of the Victorian Railways, Mr. Reynolds, who spoke on the problems encountered, and gave interesting details of the work on the standard gauge railway between Albury and Melbourne. Future plans for the freight terminal at Dynon, and the passenger terminal at Spencer Street were also discussed. The whole talk was amply illustrated by suitable slides.

The May meeting also opened at 8.0 p.m. sharp; in fact, the Organising Chairman had to wait half a minute to do so! Models for display included a 'Kitmaster' Garrett, a motorised 'Kitmaster' 2-10-0 'Evening Star', and a 'Marklin' 4-6-2 rebuilt to a VR 4-6-4 'R' class. Various members reported on the formation of sub-branches. The Wingrove sub-branch has been formed, the Bentleigh sub-branch were holding their inaugural meeting on Friday the 19th May, the Ivanhoe sub-branch were holding theirs on 13th May, and the Glen Iris East Malvern sub-branch was formed in five minutes at the meeting!

The syllabus item was given by Mr. H.E. Tisher, on methods used by him in the construction of scenery for his "Swiss Valley Railway". Herb showed numerous samples of materials gathered by him to assist in the making of scenery. Many new ideas were presented to the meeting, and members were given food for thought with some of them.

The Saturday afternoon meeting held at Marcus Traylen's was attended by 28 members throughout the afternoon. Marcus' new layout was given a thorough going over; it is point to point and well sceniced. Marcus spent the afternoon running trains and answering questions, and was generally kept busy. All present had an enjoyable time.

Tim Dunlop.

This report makes history and doubtless has to do with the new go ahead two-man committee (see below). Anyhow we apologise for the fact that there has been no report from the Victorian branch from January last year until this one; we can only say it isn't our fault and hope that from now on reports will keep coming in.

Editor.

The June meeting was advanced from the second Thursday to the first Friday of the month, and every member received due notice. It was pleasing to see that thirteen of our country members made the effort to attend and we believe they enjoyed their week-end. Some anxiety was caused through the power strike but alternative meeting places, with emergency lighting that had been tentatively arranged, were not required, and some sixty odd members and visitors turned up at Swinburne Technical College on the Friday night.

The record is still standing; the meeting was declared open at 8.0 p.m. for the third meeting in succession! Two of our speakers were unable to attend but Norm Wadeson stepped into the breach most capably and stretched his fifteen minute talk on Timber Trams into nearly an hour; all this at about ten minutes notice. Some amusement was caused when the Organising Chairman, Jack McLean, introduced first his State Branch Secretary,then by simply turning the card around, the Federal President. Tim spoke on some of the problems that crop up in AMRA, introduced all the members of the Federal Committee who were at the meeting, and concluded by requesting any volunteers to contact him or any member of the Federal Committee.

Saturday morning was spent shopping by the country members and it would be safe to say that the Melbourne shops would like the Vic. Branch to have a country week-end every month. On Saturday afternoon various layouts were visited, and Saturday night was open house at Jack McLean's, who still has not got over the fact that he didn't do anything to entertain anyone, apart from turning them loose in the garage to operate the layout. Goodness knows what the neighbours thought as shouts of "Is line clear for passenger train?" rang through the night, with appropriate answers, not rude ones, rung in reply. A terrific supper was most capably handled by Mrs. McLean, and some films and slides finished off a really super night.

Sunday morning was reserved for the country boys to visit Alan Good's layout at Murrumbeena, and inspect what must be one of the largest model railways in this country.

Tim Dunlop.

QUEENSLAND - FEBRUARY TO MAY 1961

At its February meeting the branch took steps to settle the difficulty of local finance by deciding that all members residing within 25 miles of Brisbane would pay a local subscription of five shillings, to be due and payable on 1st September when the Federal subscription falls due. There was also an extra meeting in February, followed by others in March and April, when Harry Harley provided interesting demonstrations and instruction on lathe work.

Other meetings in the period under review included a talk by Mr. Wardock, illustrated by lantern slides, describing the activities at the Brisbane abattoirs at Cannon Hill. There was also an outing to Marburg on 15th April in rail car 2000 with the A.R.H.S. The Annual General Meeting took place on 11th May when elections resulted in the following appointments:Chairman, Bill Hale; Vice Chairman, Bob Cuffe;Secretary, Stephen Suggit; Treasurer, Ken Innes; Librarian and Assistant Secretary, Eric Lyon, and Junior Members' Representative, Francis Meek.

Stephen Suggit.

THE POP VALVE! FOR READER'S LETTERS

To the Editor:

I am rather disturbed by some of the criticisms appearing in "Pop Valve" about various trade products. Some writers give instances of faulty parts etc., but do not state the source, i.e. hobby shop or private sale, and more important, do not state whether they complained and gave the dealer (if any) a chance to replace the faulty article. In modern mass production, an occasional faulty item will occur and it is generally considered that the customer has no legitimate complaint, provided the dealer will make good any defects.

A case in point concerns the two- and four-wheel leading trucks instanced in the last Journal. I have eight locos equipped with these and find them very good and I have five locos equipped with Jap three-pole motors - again no complaints; any leading truck that keeps on over my truck is very good as the layout is built on an earth floor which has subsided badly and gives some wonderful ups and downs.

With regard to Broughton Boydell's request for a hobby shop to cater for 'O' gauge enthusiasts, the Model Dockyard, 216 Swanston Street, Melbourne, has everything required for scratch building including wheels, bogies, rolling stock and loco parts, motors and rail, as well as a few Jap locos and cars. A shipment of Bassett Lowke 'O' gauge locos is expected soon. They really try to help 'O' gaugers and deserve our support.

The A.R.M. Hobby Centre, Burringar, Balgowlah, N.S.W., also has some 'O' gauge items.

20/5/61. Dick Gutteridge, Yarrawonga, Vic.

To the Editor:

I would like to put forward an idea concerning prototype drawings. I think that all plans from the 'Journal' should be reprinted separately and sold to members, or even the general public, for about sixpence each; this would result in a raising of club funds. Commercial plans cost approximately three shillings depending on size, and Government Railways plans cost about two shillings. Thus the scratch builder interested in Australian prototype could buy from us. I know that the duplicated plans are slightly inaccurate, but the small fraction of inaccuracy hardly matters, as most scratch builders haven't the skill to model to within two-three scale inches.

4/4/61. John Carlson, Homebush, N.S.W.

This seems to be quite a good idea, especially for those members not having access to back numbers of Journal. Most of the nylon stencils are usable again, so it shouldn't cost the Association anything. We'd better speak to Tim Dunlop nicely and ask him if he's got time to do it.

Editor.

To the Editor:

In reply to John Treacy on the matter of lead length in the article on track construction; there was a bit of a box-up there. The correct dimensions are shown in the diagram, but read wrong in the text, just to confuse everybody. Nobody, incidentally, appeared to have picked up the really glaring error in Fig.6, where the wheel runs on the wrong rail!

9/4/61. Tim Dunlop, Alphington, Vic.

To the Editor:

In my letter to "Pop Valve" of 4/2/61, I asked "Where do we draw the line between models and toys?" Since I asked that question I have given some thought to the problem and have at least reached a partial answer, which is that there is no absolute dividing line; for each one of us the line comes at a different level. It is not a question of tin plate either because many excellent models, such as those by "Exley", are made of this material; neither is it necessarily a question of scale because a model railway built strictly to scale would be quite impracticable.

The dividing line between toys and models is just as tenuous as that between good and bad music. There must be a compromise between scale, good running and robustness which will be to a different standard for each one of us. Thus the owner of a near to scale layout may regard a good quality proprietary layout as a toy, whose owner may in turn have the same thoughts about a Hornby 'O' gauge tin plate railway set out on the floor; and what does it matter as long as its owner is satisfied?

But now to go to the second part of my letter in which I say some unkind things about people outside the hobby, who regard all models as toys. Actually I have met very few people who regard models in this light. Several times I have had the pleasure of visits from friends, and sometimes from strangers, while the layout is in operation and great interest has always been taken over it. So much so that some of the folk took over the controller and after a few "rear ons" and "side ons" became experts at "train driving", including some of the ladies!

So this talk about toy trains now assumes a different flavour. If you have any friends who regard models as toys, invite them into your home, show them your layout, and if possible give them the controls for a while, and you will find very few who will refuse to take an interest.

25/6/61. Frank Puls, East Preston, Vic.

To the Editor:

I have lately taken on the most incredibly interesting task of building up a proprietary layout for the Blind School. I have started by just talking about trains with the aid of "Triang" equipment, other models, Braille timetables and track diagrams made of matches stuck on to wood with pins. One of the boys, aged about thirteen, had sight for a short while but his eyes packed up again. Anyway he seems genuinely interested in trains and I had him over to my place to "show" him the railway in the garage. His remarks were all the encouragement I need. He said "I never thought a model railway would be like this - its just like a real railway - this is beaut", If I'd had any scenery painted on the wall,he wouldn't have known,but he did know that I was modelling a railway with a view to performing representative prototype movements on it, and not modelling a town scene, the main feature of which was a railway.

15/5/61 Jack McLean, Box Hill, Vic.

To the Editor:

Now here is a curious situation. One of the most popular categories in the Journal as shown by the Questionnaire is the "Description of Layouts", but no one writes them; as Norm Read pointed out not so long ago, the cricketers who do wonders have to leave it to ghost writers to write up their exploits, and that makes it rather tough on Journal Editors.

So "Argus" comes to the party and offers to write up the layouts of those cricketers whose bat is mightier than the pen and what is the result? Quite a passable article on Ron Farhall's line. Then along comes the Article Competition and the articles were voted for on a basis of the interest of the subject (not the quality of the journalism) and Argus' article gets ONE VOTE. In addition to that "Argus" has offered to write up the layout of anyone who cares to ask him and up to the present, Argus has not had one request. What can you make of it?

15/5/61 Jack McLean, Box Hill, Vic.

THE CAUSE OF THE DELAY

BY STEPHEN McLEAN

While on our way to Portarlington, my father and I stopped at Manor. The only things we could see from the platform were two farms, and about fifty years or so ago when it was built it couldn't have been much more desolate. Although most stations have a booking office with a signal box stuck on, Manor has the opposite - the signal box is the main building with a booking office stuck on to it. The station layout consists of three roads and two dead ends to help cross long trains. The first train we saw was a goods with a "T", about 35 trucks and a very wobbly "Z" van which seemed to be in a very great hurry. Shortly after the goods went through, the station master rang up control on the phone and told us that two passenger trains were going to cross. Since neither had to use the platform, the first to arrive, the Up, went straight into the loop. Then the Down, which consisted of a "B", about nine cars and a van, went through at a furious rate. After a clanking of levers and a changing of points the Up, consisting of a "B", two six-wheeled bogie cars and a BCE, departed after waiting in the loop. During this time a little boy, who wanted to know why the train had stopped, yelled out, presumably to the driver, "What'sa matter? Ya run outa petrol?"

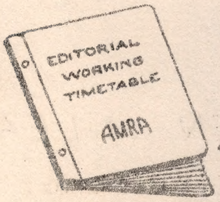
STEAM UNDER-STEAM OVER

BY JACK McLEAN

When I was in England I was at one time stationed at Acaster Malbis about ten miles south of York, in the "V" formed by the four track line to Leeds and the double track line to Selby. Quite close to the R.A.F. station on the Selby line was the Naburn swing bridge over the River Ouse.

High up above the tracks, and placed across the top of the bow girders, was a signal box. I biked over there one night, left my bike on the bank, walked along the tracks to the centre of the bridge, climbed up the iron ladder to the signal box, knocked on the door and spent a very pleasant evening talking about trains and places. Every now and then the block bells would foretell the arrival of a train which would crash on to the bridge in much the same way as an engine stumbles on to a turn-table.

When the bridge opened the whole structure, bridge and signal box complete, turned about ninety degrees, and so special arrangements were made to work the signals. The wires for the signal circuits and block instruments led from a pole above the signal box in a graceful arc to another pole on the river bank, rather in the same way as the current reaches an electrically operated turn-table. But this swing bridge was not electrically operated; it was driven by a steam engine tucked away under the centre portion of the bridge with a fireman on duty twentyfour hours a day to provide the power.



SCHEDULED NEXT ISSUE.

Articles scheduled for the November issue carry on with our policy of giving you a little bit of this and a little bit of that, even to the extent of giving our readers in Western Australia a fragment from their State for the first time, Broughton Boydell being the author, and "Esperance Railway Yards (W.A.)" the title. Then we have a little bit of ancient history from "Lancastrian" who gives us in "Planet and her Successors" the story of the development of the inside cylinder engine from its earliest stages.

For the active modeller we have something of interest in Alan Dowel's latest article in which he tells us how he devised a method of sharing his garage with his car. There is also another article on another selection of Q.G.R. goods wagons, this time the open four wheelers. And who would like another short story? "The Fireman" was first printed in "The Link" last year as a Christmas Ghost Story; we think you will like it too and so we are reprinting it in time for Christmas this year.